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CASES and PRACTICAL REMARKS
in *SURGERY*,

with SKETCHES of MACHINES,
simple in their construction,
easy in their application,
and of APPROVED USE.

The SECOND EDITION,
with large additions and emendations,
By BENJAMIN GOOCH
SURGEON.

VOL. II.



Patet Omnibus.

NORWICH,
printed for the AUTHOR,
by W. CHASE and sold by him,
and the Booksellers in LONDON.
MDCCLXVII.





T O
WILLIAM FELLOWES, Esq;
O F
SHOTTESHAM in NORFOLK.

SIR,

IT was your erecting an Infirmary for the benefit of the poor, which gave me an opportunity of making some of the following observations in Surgery : and when the opinion of my friends inclined me to publish them, a sense of my obligations to you called for this profession of my gratitude.

PROVIDENCE, that wisely orders all things, has blessed you with an ample fortune ; it is a blessing because you employ it to the best purposes :

†

the

the compassion you shew to the necessitous and miserable, and the constant care you take to supply their wants, and relieve their distresses, make your name revered, by more than those who are daily objects of your bounty, and will ever be remembered.

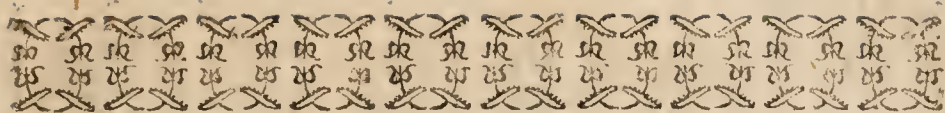
THIS benevolence of heart, which makes you the Guardian of the poor, makes you still more extensively beneficial : your strict impartiality in the administration of justice, and superior abilities most readily exerted on all occasions, for the common good of mankind, render you an universal Friend and Benefactor.

I am, Sir,

Your most obliged,

humble Servant,

B. GOOCH.



T H E

P R E F A C E.

IN the last half century, the knowledge of Surgery has been much advanced by a general spirit of emulation; which seems to have prevailed throughout most parts of *Europe*; it has been cultivated here, by men of great application and abilities in the profession, and the benevolence of the public has coöperated with their private endeavours: for, to the immortal honor of this kingdom, in less than half that period of time, many Hospitals have been founded, and are now well supported, by voluntary contributions; which not only afford the best relief to the greatest and most deplorable objects of charity, but have a direct tendency to promote and perfect the knowledge of this art, making the benefit extend to all ranks of people.

† †

IN

In the winter of the year 1758, which I spent in *London*, I received a message from the late Lord Bishop of *Norwich*, by Mr. *Stillingfleet*, a Gentleman well known in the literary world ; and accordingly I waited upon his Lordship. From several conferences with him in *London*, and afterwards in *Norwich*, and the steps that were taken in consequence thereof, concerning erecting a general Hospital for the County of *Norfolk* and the City of *Norwich* jointly, I have good reasons to believe, that had he lived and continued Bishop of *Norwich*, such a beneficent Establishment wou'd have been completed before now ; as every attempt of this nature has happily succeeded in this kingdom, to the wish of its promoters : and I hope that charitable and pious scheme will be revived and attended with all imaginable success ; nothing seems wanting even now to accomplish it, but to have a subscription properly opened.

IT may be truly said, that Surgery is arrived to such a degree of perfection in *Great Britain*, as leaves no room for *France* any longer to boast of her superiority ; but tho'
Anatomy

Anatomy and every branch of Surgery flourish, and are accurately taught in *London*, by the most celebrated men, making a journey to *Paris* unnecessary to finish a Surgeon's education, still we must think the *Parisians* happy in their late very excellent institution, the Royal Academy of Surgery, chiefly owing to two great men, *Mareschal* and *Peyronie*. (a)

RECORDING memorable facts has been looked upon as a laudable undertaking in all ages and countries, even before there were any regular professors of the medical art in the world ; and though the fundamental rules of Surgery are so well known and established, that little seems left to be done in those points, yet making observations carefully, and communicating them

Read Serjeant
Wifeman's Epistle
Dedicatory
before his ex-
cellent chirur-
gical works.

† † † faithfully,

(a) *Mons. de la Peyronie* left at his death, the greater part of a large fortune he had acquired by his profession, for the advancement of Surgery, particularly to the University of *Montpelier*, where he had been educated : and among other donations he added 300 livres to the golden prize medal annually given by the Royal Academy of Surgery at *Paris*, which was originally but 200.—See the panegyric or elogy upon this great man, prefixed to the second vol. of the mem. of that Society,

faithfully, with the particular treatment of the most remarkable cases, as well unfavourable as favourable in their events, will be of singular service, and prove the surest guides in practice, on various occasions. These considerations make me wish, that every attentive practitioner wou'd shew his inclination of being useful, in this manner to the community, in the plainest language, with such conciseness and perspicuity, as are best adapted to the relation of matters of fact ; and the candid will excuse little errors of diction or otherwise.

WHILST I was confined at *Bath* some years ago, I wrote the first edition of my *Observations in Surgery* ; and after adding a few sketches, more fully to illustrate some of the cases, I shewed them to my friends, whose approbation determined me to publish them.

THE reception they met with have encouraged me to offer a second edition, with additions upon the same plan ; hoping that what was originally intended for a confined purpose, may prove more extensively useful.

GREATER

GREATER attention and assiduity in discharging the duty of my profession, than was consistent with my infirm state of health, brought my life into imminent danger, and obliged me to retire from business ; but having long designed a second edition, I wrote at intervals when able, and at other times employed an Amanuensis, during a very tedious confinement.

IT having pleased God, in his infinite mercy and goodness, to enable me, I have carefully revised and corrected these papers, and most heartily wish they may answer the end proposed in publishing them : for to promote, in any degree, the benefit of mankind, and the improvement of a profession I highly regard, will afford me one of the greatest pleasures I am capable of enjoying, in the evening of my days.

Halesworth,
September the 19th, 1767.



POSTSCRIPT.

I HOPE my intention will be my apology, and that the following proposition will not be deemed an unbecoming liberty, which I submit with all imaginable deference, to the consideration of those Gentlemen, concerned in the management of Hospitals, in any part of this Kingdom, as well the Governors as the Physicians and Surgeons. The proposition is, how far it might be beneficial, and conducive to the edification of pupils, to have the neatest, best and most complete sets of modern instruments, and machines of every kind, for the use of the Hospital; with a skeleton, and a few other practical, anatomical preparations, to have recourse to occasionally, and a suitable collection of practical books, in Latin, French, and English, kept in a room appropriated to this purpose, under the care and direction
of

of the House-Surgeon ; allowing him to shew them to the pupils, under due restrictions and regulations. By these means those who are emulous and studiously inclined, will have the best opportunity of being properly informed, and of getting clear and adequate ideas of the things essentially necessary to be known, to regulate their future pursuits and practice : and by making them early the objects of their study and attention, assisted by the communications and explanations of the Gentlemen intrusted with this part of their education, they may receive inexpressible advantages.

THE expence to the hospital fund, in furnishing this requisite provision, wou'd be very trifling, compared with the benefit that I humbly conceive would accrue from it, by improving and diffusing the knowledge of Surgery in these fundamentals, wherein the general good of mankind is so manifestly concerned : and the lectures given, by the Surgeons of Hospitals, to their pupils, upon extraordinary cases, demonstrating to them the reasons of their practice, must prove very instructive.



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Remarks	

Remarks upon the contents of incysted tumors, to be compared with those at the end of *Wens*, Pag. 283, and at Pag. 381.

Before and since the following sheets were sent to the press, I have proved by experiments, beyond question, that the contents of the three incysted tumors called *Wens*, going under the denomination of *Steatoma*, *Atheroma*, and *Meliceris*, are inspissated lymph, appearing under different degrees of inspissation.——The last experiment I made was before a Physician and Surgeon, upon a *Meliceris*, that I very lately took off a person's head ; on which part this *Species* of tumor is most frequently found. The fluid contained in it, inspissated with heat like the white of an egg, and the cyst, by boiling in water, soon became white, and almost as hard as horn.—And I am inclined to think glandular tumors generally proceed from lymph.

ERRATA.

Page 10 line 16, put but for and.—P. 42 l. 2 and 17, put out u in electuary.—P. 47 l. 24, write Julep for Julip.—P. 89 l. 19, breadth for breath.—P. 140 l. 13, pleuritic for pleu-
retic.—P. 140 last l. entreaty for intreaty.—P. 144 l. 3, pleuritic for pleuretic.—P. 144 last l. del. s in ribs —P. 180 l. 18, put has for have.—P. 273, add date to letter, *Shot-tesham, June the 20th, 1758* —P. 279 l. 5, whom for who.—P. 281 l. 22, add right before *Trapezius*.—P. 288 note l. 2, *Theoriam*.—P. 293, marginal note, extemporaneous.—P. 296 l. 5, write cedematous instead of ædematous.—P. 299 make a dash after *obsta*.—P. 311 add in Surgery and the page: and towards the conclusion of the note in that page, write *Bellog's* for *Belloy's*.—P. 337, add other after some.—P. 350, in explanation of the plate, put 15 for 14.—P. 355 add, I think, before *Puff-Ball*.—P. 382 l. 12, put 17 for 15.—P. 383 del. The at the bottom of the text.—In explanation at P. 384, put 17 for 15.—P. 417 l. 11, laudanum.—P. 418 l. 1, *materia*.—P. 419 put where for were, in the last line but one.

DIRECTIONS to the Book-Binder.

Place before Treatise on Wounds the Plate of the *Samaritan*; and before the Cases and Remarks, that of the Temple of *Æsculapius*.

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C A S E S

A N D

R E M A R K S

I N

S U R G E R Y.

A case of a fractured scull in an old
man.

March the 19th, 1749.

M. H. a robust labouring Man, aged sixty-one, received a blow upon his head, with the end of a rafter : he instantly fell down deprived of sense and motion, and was carried home as a dead man; but shewed signs of life soon after. A violent *Ecchymosis* appeared, without any breach of the
A skin ;

skin ; upon scalping, the same day, a very extensive fracture was discovered, with a great comminution and depression of the superior part of the right parietal bone : as soon as the *hæmorrhage* was restrained, the trephine was applied, and it was found necessary to make six perforations, in order to remove the fragments and depressed pieces of the *Cranium* then in view ; after the removal of them, we observed a separation of the *Dura Mater* from the *Cranium*, much beyond the perforations.

AFTER the operation, the patient was dressed as usual in such cases, was let blood frequently, and kept to a strict regimen, laxatives being administered occasionally. He recovered his senses perfectly in about ten days ; the wound had a kind aspect, and the symptomatic fever abated, which gave us great hopes of his recovery.

As the digestion advanced, we observed a farther separation of the *Dura Mater* from the *Cranium*, at the superior and most concave part of the parietal bone, which continued as far as the inferior and depending point,

point, where there was a lodgement of matter at every dressing ; the discharge seemed now more than a well conditioned wound, of that apparent size, ought to produce, his pulse became quicker, with great restlessness, and soon after he fell into a *Stupor*, as at first.

THESE threatening symptoms returning, and growing worse every hour, we were reduced to great difficulty, to know how to act with the strongest probability of relieving our patient, but upon observing whence most matter proceeded at every dressing, underneath the *Cranium*, at length we resolved to remove another portion of the scalp, beginning at the superior part, describing the segment of a circle towards the *Occiput*, and so coming round to the inferior part of the first incision. This step discovered to us, at the most depending part, a triangular sharp-pointed fragment of the *Cranium*, struck into, if not quite through the *Dura Mater*, whence the matter had issued at every dressing, for three or four days ; and now we cou'd also discern small fissures ex-

tending, in various directions, into both frontal and temporal bone.

UNDER these circumstances, after mature deliberation, we thought it most advisable to remove the whole arch of bone, from which the *Dura Mater* was detached, as has been described, which, being impracticable by any other means, was effected by seven perforations of the trephine, on *April* the 1st. After this second operation, and extracting the triangular piece of bone, he grew immediately better, and every bad symptom gradually vanished.

IN the beginning of *July*, he was in a condition to walk two miles every day to be dressed; but it was more than a year before the cicatrice was perfected; and afterwards vesicles now and then arose, broke, discharged a little, and then healed without any difficulty, by the common applications.

THE substance that supplied the loss of the *Cranium* never entirely ossified, but in a young subject probably it wou'd have acquired such a degree of hardness, or solidity, as constitutes bone.

IN order to guard the brain against external injuries, he constantly wore a thin iron, or tin plate, lined with some soft material, as long as he lived ; following his ordinary laborious employment many years, till he was incapacitated by being grievously afflicted with the stone in his bladder ; of which disease he died, and was buried before I received intelligence of his death, or I wou'd, if possible, have obtained leave to have inspected his head.

PLATE I. exhibits a view of this fracture.

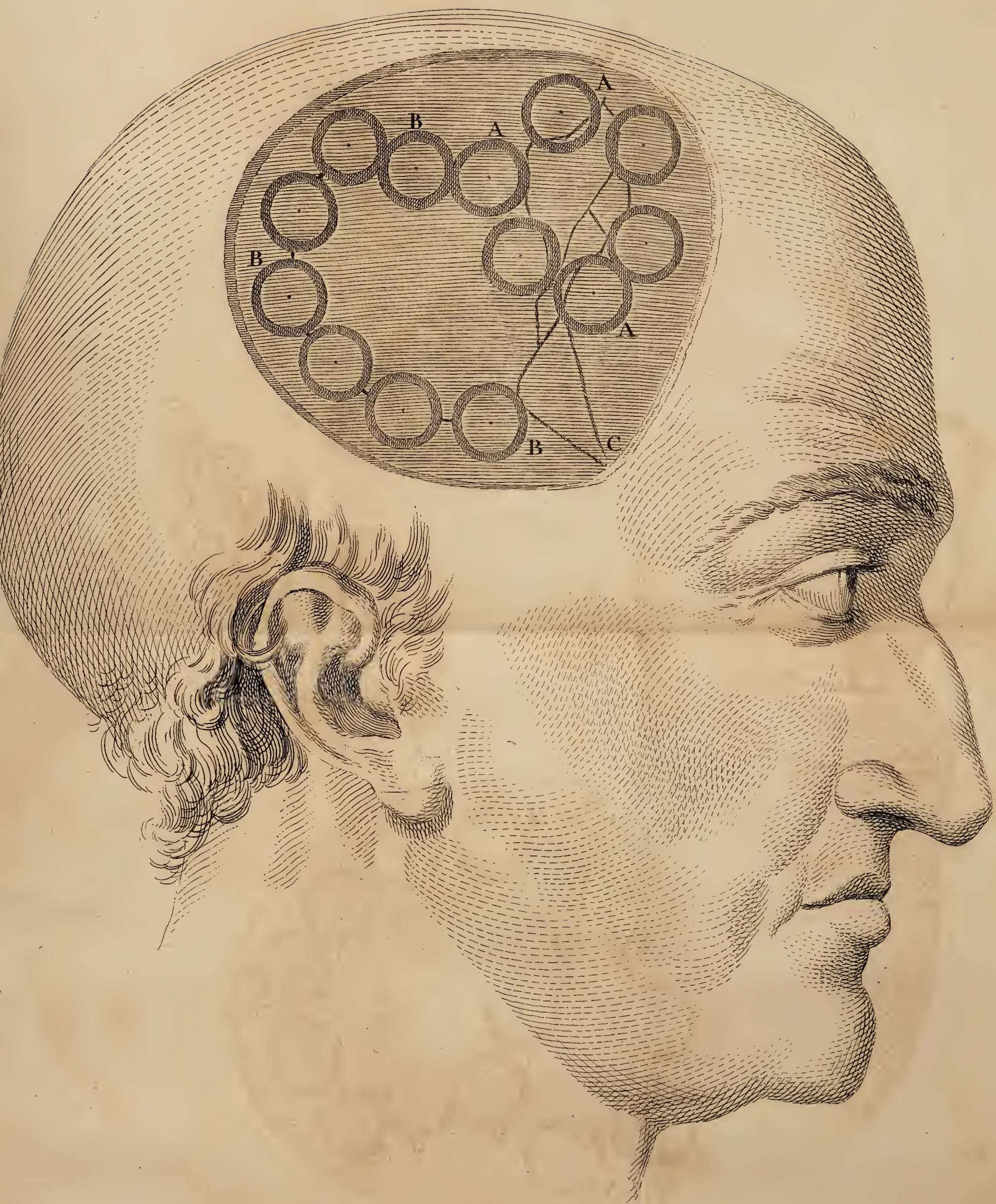
P L A T E I.

A. A. A. The extent of the first operation performed *March* the 19th.

B. B. B. The extent of the second operation performed *April* the 1st.

C. The point of the triangular piece of bone, which was struck into the *Dura Mater*, and discovered upon the second operation.

That kind of Trepan called the Trephine is the most commodious, and it is now, I believe, in general use every where.



An uncommon case of a fracture of the scull.

June the 24th, 1749.

MR. J. E. of T. aged about thirty, came to my house when I happened to be from home, and asked a gentleman who lived with me, to dress a small wound he had received in the middle of his forehead, without saying how it happened; and a plaster was accordingly applied, without examining the wound, it appearing so very slight.

I WAS called to him three days after, and found him in a *Stupor*, attended with other threatening Symptoms. Upon examining the wound, which was indeed very trifling in its external appearance, my probe passed, without any resistance, into the brain more than two inches; at the extremity of which, I was sensible of touching some solid body, and took it to be a fragment of the internal table of the scull, after having been informed how the accident happened, which

which was by the breech-pin of a gun, when the barrel flew out of the stock upon discharging it.

I SCALPED him, stopped the *hæmorrhage*, with the needle and ligature, and trepanned him immediately, making two perforations adjoining, fearing it shou'd be impracticable to extract the fragments thro' one, which might be driven into the brain. The diameter of the fracture of the external table was of no larger extent than the tail of the breech-pin; but one of the fragments of the internal table was almost as broad as a shilling, much too big to have been extracted through a single perforation.

THE *Stupor*, &c. went off soon after the operation, and he recovered his senses perfectly: and though some portion of the brain was discharged at every dressing, the symptoms continued so favourable till the eighteenth day, that I began to be flattered with hopes of his recovery; but the *Stupor*, &c. then returned, and he died in convulsions the next day.

I cou'd not obtain leave to open the scull after the patient's death, to examine the brain, &c.

Another

Another case of a fracture of the scull and wound of the brain made by the breech-pin of a gun near three inches long, which was lodged in the left hemisphere of the brain.

January the 18th, 1763.

A. B. a gentleman's servant, about nineteen years of age, discharging a gun, the breech-pin flew out of the barrel, entered the *Os Frontis*, including part of the frontal sinus, and sunk deep into the brain, quite out of sight, near an inch below the internal surface of the scull. He killed the bird he shot at, and fell himself at the same instant; a person with him cried out, "He is dead"; to which he immediately answered, "No, I am not dead, come and help me up." His senses were not in the least impaired, and as soon as he was set upon his legs, he walked very well.

THE

THE next day I was desired to meet the Surgeon, who was forthwith called to him after the accident, and we found some of the brain in the wound. His understanding was not yet affected, he answered all questions very pertinently, and complained only of a little pain in his head; but vomited now and then, and had a depressed pulse. When we had deliberately considered all circumstances, we came to a resolution to scalp and trepan him directly. We made two perforations, through which we easily extracted some large fragments of the bone, and thought we felt another, larger than any one we had extracted, lodged much deeper in the brain, and this proved to be the breech-pin, that we were not the least apprehensive of finding there. The wound was then dressed, and the patient treated, according to the usual rules directed in such cases.

Soon after the operation, the pain of his head went almost entirely off, the vomiting ceased, and his pulse grew stronger. His senses continued perfect till the eighth day, and the wound externally had

had no unfavourable aspect, as the Surgeon informed me, though some of the brain was evacuated at every dressing. The first symptom shewing the nervous system affected, was a dimness of sight; soon after a total blindness succeeded; next day, on the opposite side to that which was wounded, he became paralytic, and the other was convulsed; the day after, he lost his speech, and died on the fourteenth day.

Lately Mr. *Leath*, a Surgeon of character at *Acle* in *Norfolk*, gave me the history of a case which ended happily, wherein the breech-pin of the gun entered the *Os Frontis*, and wounded the brain, but was not lost in it as in the preceding case.

A fracture upon the *Os Frontis*, attended with an erysipelatous tumor of an enormous size.

August the 3d, 1754.

THE wife of T. H. of H. aged about fifty, of a strong constitution and bilious habit, received this accident by a stone thrown with great force: the wound tho' inconsiderable was immediately stitched, and the case, in all respects, treated contrary to the rules of Surgery.

I WAS called to her on the eighth day after the accident, and found an erysipelatous tumor, partly emphysematous, had seized her head, face, and neck, to the greatest degree I had ever seen; those parts were as much swelled as in the most confluent kind of small-pox, the fever ran very high, she was delirious, breathed very short with great labour and difficulty, and indeed I thought she cou'd not have lived till the next day. I discovered a fracture with my probe, which easily passed a good way round
about

about upon the scull, the scalp being quite separated from it. I made a longitudinal incision, but did not venture to remove the scalp, under these circumstances, to inform myself of the nature and extent of the fracture. As yet, no evacuations had been made, and every rational means of relief had been neglected.

REPEATED bleeding, as her strength would bear, lenient purgatives, nitrous medicines with camphire, the plentiful use of diluents, &c. with scarifications and proper topics, gave her relief in a few days, beyond expectation : I then removed a sufficient portion of the scalp to bring the fracture in view, applied the trephine, and found much extravasated blood upon the *Dura Mater*, which was in an inflamed state. Bleeding, lenient purgatives, &c. were occasionally continued after the operation. It was a long time before she appeared out of danger, and was recovered with the utmost difficulty.

In a single perforation of the scull after trepanning, I have often found the plate of lead, described and strongly recommended by *Belloste*, in his Hospital Surgeon, of signal service in keeping the *Dura Mater* sufficiently depressed ; by which the growth of fungous flesh from thence, through the perforation, will be easily prevented, and the discharge of any kind of fluid facilitated, that may happen to be lodged between the scull and that membrane : I never saw any inconveniencies arise from the use of it ; but dreadful consequences may justly be apprehended from cutting off fungus, or destroying it with escharotics, in these cases. By a piece of card laid over the ears of the plate, raised a little above the superficies of the scull, the pressure may be regulated to a due degree, with a compress and the common bandage, or with strips of common plaster applied crucially over the wound, which are preferable, without any other bandage than to contain the necessary applications. The first time I performed this operation, I found the same inconvenience followed it, which I suppose put *Belloste* upon inventing this plate, and used it several times, without knowing it had been used by any Surgeon before.

A case in which the trepan was successfully applied to the occipital bone.

THE Reverend Mr. *Baker*, of *Heddenham*, a very worthy divine, in the fifty-ninth year of his age, of a robust constitution and sanguine complexion, by a fall from his horse running away with him, *July* the 11th, 1757, received one large and extensive fissure, in a right line downwards, from near the superior angle of the occipital bone, and another as small as a hair, diverging at an acute angle, about an inch from the top of the large one, on the left side of it, extending almost to the lambdoidal suture.

HE was taken up speechless and senseless, the *Stupor* went off, in a great measure, upon scalping and plentiful bleeding; a fever soon followed, attended with delirious symptoms at times, with an appearance of the intellectual faculties being much impaired, though not entirely abolished; but he could recollect nothing of what had happened relative to the accident.

MANY

MANY circumstances concurred to delay the use of the trepan till the eleventh day after the accident, when it being unanimously agreed upon in consultation, by Doctor *Bennet*, of *Norwich*, Messrs. *Cooper*, *Manning*, and *Lewis*, of *Bungay* in *Suffolk*, Surgeons, with myself, and consented to by the persons nearly concerned, a single perforation of the bone was made, including a small part of the capillary fissure as well as the other, without any ill accident attending the operation : we bore in mind this excellent maxim in Surgery, *Festina lente*, examining the *Sulcus* frequently with a probe, or quill cut like a pick-tooth, to observe where the saw had cut through ; and when the piece was moveable, holding by one third or fourth of its circumference, we thought it most adviseable to raise it up with the *Elevator* ; the *Dura Mater* then appeared highly inflamed, looking of a dusky red, much like a lump of coagulated blood. We afterwards, with small gouges, carving and engraving tools, enlarged the lower part of the fissure, where we perceived an issuing of a fetid gleet, like what was discharged through the perforation,

from

from between the *Dura Mater* and the *Cranium*; and apprehending they had a communication, we shou'd have looked upon it as justifiable practice, to have made one or two perforations more with the trepan, towards that point, had not the symptoms abated.

HE had a variety of symptoms both before and after the operation, shewing the nervous system greatly disordered; but we cou'd not precisely determine what part of the *Encephalon* was most affected: before the operation he constantly complained of much pain upon the sides and fore part of his head, which was accompanied with the most intense degree of heat perceptible by our touch, and which was not sensibly abated by copious bleeding, the observance of an exact regimen, &c. About six hours after the operation, he gave signal evidence of the return of his senses, in recollecting and clearly relating the circumstances of the accident; and the pain and heat of his head soon abated: still many threatening symptoms continued, and new ones arose; among the rest, a *Spasmus cynicus* on the left side,

B

with

with a remarkable sinking and dulness, or want of lustre of the right eye at the same time, both of which proved of short duration.

AFTER plentiful bleeding, the frequent repetition of lenient purgatives, a regular use of cooling remedies, and keeping him strictly to a soft liquid diet, it was thought proper, on account of febrile symptoms which increased periodically, and the appearance of a blackish slough upon the *Dura Mater*, to give the Bark, joining Rhubarb with it to prevent costiveness.

ABOUT a fortnight after the operation, we began to conceive great hopes of his recovery; in *October* the wound was contracted into the compass of a fontanel, and kept open at the bottom as such; his intellects were perfect, he was able to take the air in his chariot, and his health daily improved. He lived several years after, and enjoyed as good health, as he had done for many before.

IN this case, we wanted circumstantial and well warranted precedents, to enforce the
the

the application of the trepan, and satisfy all parties concerned, of the propriety and necessity of it, upon the occipital bone. It is to be wished that Writers of approved character, who have treated this subject, had farther considered a point of so much importance to surgery ; for the *Dura Mater* may be so injured, that though the *Cerebellum* has received no immediate hurt, whence, it is supposed, death wou'd instantly ensue, yet, without trepanning, the patient must inevitably perish : and this appearing to be the state of the case before us, had the hazard of the operation been much greater, we shou'd have thought ourselves justified in the practice.

THE objections which have been made against it, are, a great difficulty of perforating the bone, on account of the unequal thickness of it, the danger of wounding the *Cerebellum*, and of opening a *Sinus*. Shou'd the latter happen we have instances of its not proving mortal ; and upon a strict examination of the bone, we believe, it will appear that few parts of it have such an inequality, in the circular compass of the

saw, as to be more than a little thicker in one part than the other ; from which consideration, and the *Cerebellum* and *Sinuses* being well defended by so thick a membrane as the *Dura Mater*, we are encouraged to hope, that a cautious Operator may succeed without injuring either ; but he shou'd be well acquainted with the structure of the bone and the respective situation of the parts, proceeding with the utmost circumspection and prudence, where the practice may not yet be thought sufficiently authorized.

I have since trepanned the occipital bone with safety, over the right lateral *sinus*, and the piece taken out was a great deal thicker in one part than the other.

See Med. Museum, Numb. 55, in which are related two cases, of the operation having been performed with success, upon the occipital bone ; and one in Numb. 60 of that periodical work.

Vid. *Jacobi Bontii* Observ. vi.

De insigni *Cranii Fractura*.

This singular and very dreadful accident happened to a Sailor, through carelessness, as he was employed in cleaning and careening the Ship ; having his head inclined to his work, it was crushed between the ship and the boat he was in, by the impulse of a wave ; and though great part of the occipital bone was extracted in fragments, at different times, almost as far as the *Foramen magnum*, yet he was perfectly cured in about six months, by *Bontius* and another eminent practitioner, beyond their expectation.

A fissure upon the *Os temporale*, &c. attended with uncommon circumstances, in which trepanning happily succeeded.

June the 5th, 1763.

MR. D. J. of F. a Gentleman of great eminence in the law, about 55 years of age, and of a vigorous constitution and active disposition, riding too briskly, as he was wont to do, his horse fell, and he was taken up by his servant in a state of absolute insensibility, and immediately conveyed to the nearest house of accommodation, where a Physician and two Surgeons attended him as soon as possible.

THE next day I was called to a consultation, in which it was agreed to scalp him forthwith, removing a portion of the temporal muscle, that was most violently contused; under which we found the *pericranium* quite separated from the bone, and a fissure extending obliquely and laterally to the parietal bone. In scalping we design-

edly included a branch of the temporal artery, suffering a considerable quantity of blood to flow from thence. The day following he was trepanned; the *Dura Mater* was found detached from the scull, having evidently the appearance of an incipient inflammation, but no extravasation was discovered.

VERY threatening symptoms still continuing, the patient constantly lying either in a lethargic or delirious state, attended with spasmodic affections, and a very irregular pulse; and seeing the operation, frequent bleeding, other evacuations, &c. brought no sensible relief, another consultation was held a few days after, consisting of two Physicians and four Surgeons; the result of which was, that scalping shou'd be farther and amply extended directly. The next day the Physicians and Surgeons all met again, and unanimously agreed that a second perforation shou'd be made, contiguous to the first, the fissure pursued, and more perforations made, if occasion required; but upon the most accurate inspection of the parts after doing this, we determined to desist

desist, though in the extent of the scalping, we had used the precaution of sufficiently providing for more perforations, shou'd such measures have been found necessary.

AFTER the second operation, venesection was still continued as freely as the patient's strength wou'd allow, with a strict observance of all other advisable rules, as before directed. The very alarming symptoms gradually abated, and in about a month he appeared in a condition to be removed to *Norwich* with safety, for the greater convenience of the constant attendance of the Physicians; and then, at his own desire and his relations, the care of him, in the part of surgery, devolved upon me singly. As this case was circumstanced, it appeared to me a point of great consequence, that one of the Physicians, if not both, shou'd always attend at the times of dressing, for the patient's benefit and my own satisfaction.

A FEVER still subsisted after his removal, more or less; sometimes accompanied with delirious symptoms, which nothing but bleeding wou'd effectually remove. He several times manifestly hurt himself, with
attention

attention to business, increasing his fever, and bringing on those alarming symptoms by that means, notwithstanding our repeated and most earnest caution against it. He frequently complained of an uncommon pain in his head, to a degree in proportion to the intenseness of the febrile symptoms; which proceeded from the temple, going off in curves above and below, tending to, and terminating at the *Occiput*, according to his own manner of describing it, when he was perfect in his understanding.

MORE than two hundred ounces of blood were taken away during the cure, and above a hundred of them in the first week after the accident; but notwithstanding this copious bleeding, and a very liberal use of diluents, attenuants and laxatives, the blood acquired the thickest buff-coloured size we ever saw; which was generally observed to be, after the first few days, from $\frac{1}{4}$ to $\frac{3}{4}$ of an inch thick; once I measured it exactly, and found it wanted but little of an inch; and it had such a strong cohesion, that by a part of it very little bigger than a straw, the whole *crassamentum* could be lifted up out of the basin.

THERE

THERE was such an exquisite sensibility in the wound, that he cou'd not bear the necessary degree of pressure by bandage, to prevent the growth of luxuriant flesh ; indeed he complained much of the slightest bandage imaginable, serving only to retain the dressings, without any evident reason from the aspect of the wound ; and this proved a great inconvenience in the cure of it, laying me under a necessity of taking such steps as I wou'd willingly have avoided.

UPON the rising of the exfoliations, the pulsation of the new-made arteries thrusting them off, was very visible to the naked eye. This uncommon phænomenon attracted our particular notice and attention ; and we also viewed these vessels with glasses for our farther satisfaction in such a curious matter, which afforded us great pleasure, having never before had an opportunity of so clearly viewing this wonderful operation of nature. On a part of the parietal bone upwards, at the distance of near an inch from the second perforation, where we cou'd not discern the least mark of Injury, even by the strictest examination with the best glasses immediately after scalping, though
we

we scraped the bone well and spunged it quite dry; yet a piece of the whole substance of the *Cranium*, about half an inch in diameter, was there cast off; through the middle of which we observed a hole running horizontally, which wou'd admit a crow's quill, giving passage to a blood-vessel.

ABOUT the beginning of October he was able to take the air in a chariot, and went home on the 25th of that month, free from any material complaint except weakness, the natural consequence of the length of his illness, confinement, &c. the exfoliation was then completed, and the cicatrization of the wound nearly so, which was likewise perfected soon after, without any breaking of the cicatrice afterwards: and in a reasonable time he recovered his health, strength, and mental faculties, all which he now enjoys as well as before the accident, without the least uneasiness in his head, and says he thinks his health is improved in some respects: But the imminent danger he has escaped, I hear, has not proved admonition sufficient to warn him against riding too desperately.

It is highly probable that the resolute perseverance in bleeding, greatly contributed to the preservation of this Gentleman's life.—Serjeant Wiseman has recorded a very memorable and pertinent case, in his excellent Works, Book 5, Chap. 9, Observ. 10.

A fracture of the scull, with fragments depressed in an extraordinary manner, in which trepanning shou'd have been immediately performed, to have given the patient a chance for his life.

March the 19th, 1758.

T. B. of P. a healthy lad, as he was driving a cart early in the morning, with unmanageable horses, had his head crushed between a wall and the fore stool of the cart. Towards Evening on the 22d I was called to meet the Surgeons who had been concerned from the beginning; but they not being acquainted with accidents of this nature, the necessary steps were omitted. The patient soon became comatose, vomited, had frequent spasms affecting different parts; and now the wound had a very ill aspect, discharging a fetid gleet.

AFTER an ample removal of the scalp, we discovered an extensive fracture, with great comminution of the right parietal bone;

bone; and there appeared no possibility of extracting or raising the depressed fragments of the scull, which were firmly fixed, and sunk considerably below the bone, forming in the centre a concave nearly equal to the natural convexity of it. With a picktooth, we cou'd find that the internal surfaces of the broken pieces were much larger than the external, and which appeared so, in a very extraordinary manner, upon viewing them after trepanning: and as they contained a great extent of the internal table underneath where the external remained entire, an attempt to have removed them, without making several perforations, as described in Pl. 2. might not only have proved difficult, or even impracticable, but probably have farther injured the subjacent parts, which had evidently suffered very much.

ALL circumstances having been deliberately considered by us, though there appeared but little reason to hope for saving the patient's life by trepanning, yet we were unanimously induced to propose it, seeing that he must inevitably perish without, and followed *Celsus's* rule; "*Anceps remedium melius*

melius quam nullum." After a true representation of the matter to his father, mother, and others nearly concerned, and having their approbation and consent to proceed as we thought most adviseable, at the desire of the other Surgeons, who had never done or seen this operation, I performed it directly, without any more loss of time, having stopped the *hæmorrhage* by ligature upon the scalping, with that view. I made four perforations, as described in the place before mentioned, which gave room to extract the fragments of the bone with great facility ; under which we found the *Dura Mater* wounded, lacerated, and mortified, with a great quantity of extravasated fluids excessively offensive, and a splinter of wood, about an inch long, and half an inch broad, that was forced through the *coronal suture*.

SOON after removing the fragments of the scull, &c. dressing the wound in the usual gentle manner, and applying easy compress and bandage, he spoke sensibly, answered many questions rationally and pertinently, which he was not able to do before, and nourishment now stayed in his stomach ; but this scene was soon changed ; about
midnight

midnight he began to talk incoherently, soon after totally lost his senses, became lethargic again, and paralytic on the opposite side, dying next day in strong convulsions.

IMMEDIATELY after his death, we examined the parts, and found the *Pia Mater* and brain itself in a mortified state, as well as the *Dura Mater*.

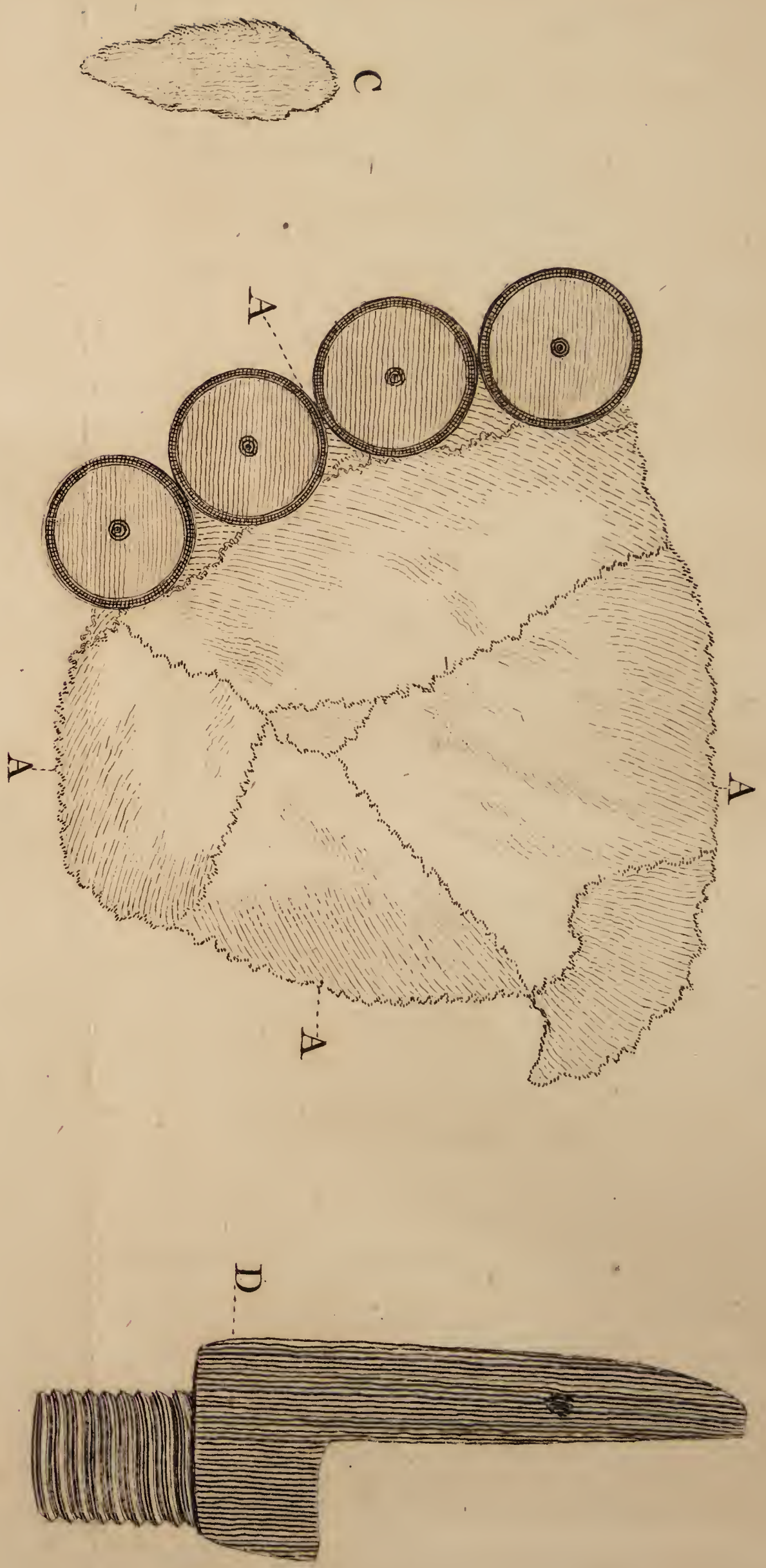
Explanation of P L A T E II.

A. A. A. A. represent the fracture, and the necessary perforations made in the scull to facilitate the extraction of the fragments.

B. B. B. B. B. B. shew the fragments separately, the darkened parts of them denoting the breaking off at the Diploë, and the greater extent of the internal than external surfaces of them.

C. the piece of wood that was forced through the scull at the *Coronal Suture*.

D. the exact figure and dimensions of the breech-pin of the gun mentioned in case the third.



The unfortunate preceding case and the following, afford cogent arguments for the strictest examination at first, and for performing the operation without delay, as it is neither difficult nor dangerous in its own nature.

WHILST I was with a Gentleman of great skill and experience in his profession, in the month of *April*, 1758, upon another occasion, an accident on the same part of the head, and similar to the preceding in many circumstances, happened to a child about three years old, upon whom he performed the operation about two hours after, making four perforations in the direction described in the last mentioned case, with a view of obtaining a proper dependence for discharge of the matter, which shou'd always be particularly attended to in this operation. After removing the loose fragments of the scull, leaving the *Dura Mater*, in all appearance, free from oppression,

C

sion, we applied to it a piece of fine linen cloth dipped into a soft vulnerary balsam, conveying over it a perforated leaden plate, exactly under the edge of the *Cranium*; which, in several instances, I have found very beneficial both in supplying the pressure of the lost bone, and allowing a ready exit to extravasated blood, collected between it and the membrane.

THE child had a good night after the operation, and was brisk and lively the next morning, nor had he any concomitants of an oppressed brain for the space of three weeks, when he suddenly fell into convulsions, and died in a short time, to the Surgeon's great surprise, who had not observed the least ill appearance in the wound. Soon after the patient's death, he accurately inspected the head, and at a considerable distance from the perforations, another part of the scull was found a little depressed, with an extravasation of blood under it, whence proceeded the fatal symptoms.

A case in which, after trepanning, the *Dura Mater* was successfully opened, on account of a serous extravasation.

LAST year I was desired by Mr. *Swift*, a Surgeon of eminence in the City of *Norwich*, where I then resided, to assist him in this operation, three days after the accident. Upon making a sufficient number of perforations with the trephine, and removing a large depressed piece of the right parietal bone, we found a considerable quantity of a serous or lymphatic fluid, collected under the *Dura Mater*, which, by pressing with our fingers, bubbled up through many small holes, made by its violent detachment from the scull. We agreed upon opening this membrane more than an inch, with a pair of fine scissars, for the free evacuation of this extravasated fluid, and the patient recovered, by the common treatment, without any threatening symptoms supervening; and those which attended before the operation, vanished soon after. I

have seen some other instances of the good effect of opening this membrane in extravasations.

WHAT has been said upon this subject of fractures of the scull, &c. in my treatise on wounds, Part II. relating to the various accidents happening to the head, may be referred to occasionally.

Of an enormous *Hydrocephalus*, attended with very singular circumstances.

DURING my abode in *London* the winter of the year 1758, in my return from *Bath*, I frequently visited the Hospitals, and shall always retain a remembrance, and a grateful sense, of the civilities I received from my brethren presiding in those schools of Surgery.

AFTER having been one day at *Guy's* Hospital, by a kind invitation from Mr. *Warner*, upon an extraordinary occasion, he carried me to Bridewell near *Fleetstreet*, to give me an opportunity of seeing the above-mentioned wonderful case. The child was nine months old, and soon after its birth some appearance of the disease was discovered, but in all other respects he seemed healthy. He took his food very well, throve with it, and shewed as much knowledge and vivacity as children of that age usually do, till a few days before its death, as

the woman who had the care of him, and whom I interrogated in a particular manner, assured me, and that he then became suddenly very dull and stupid, taking no notice of any thing, and died in convulsions.

THE head measured in circumference 29 inches, and at a depending puncture made by Mr. *Warner*, at the back part with a large trocar, he drew off six pints and a half, beer-measure, of a limpid fluid in a full stream, which had a remarkable transparency, and brightness like a stream of quicksilver. This fluid did not appear of a lymphatic nature, by inspissating with heat; I evaporated a spoonful of it over a candle, and nothing remained but a very small portion of a terrene, tasteless matter; which experiment sufficiently proved it to be an aqueous fluid.

THIS disease began in the ventricles of the brain, and the fluid gradually increasing, distended not only the membranes, but the brain itself, into a kind of bag, the whole thickness of which, including the scalp, did not exceed 4 or 5 doubles of brown paper, even

even where some bone was found, which indeed had scarce the solidity of cartilage.

A SHORT time before the child's death, a rash and daring pretender to Surgery, wou'd have adventured to open the head ; but had he been permitted to do so, it is not the least to be doubted, for very obvious reasons, that death wou'd have immediately ensued such a bold and injudicious an attempt. (*a*).

THERE is a spurious kind of *Hydrocephalus*, much of the nature of the *Spina bifida*, appearing on the lower part of the *occiput*, like a bladder of water, underneath which there is a deficiency of bone. Opening this tumor wou'd, in all probability, be attended with the same fatal consequences, as opening that in the *Spina bifida*. (*b*)

A

(*a*) Doctor *Hunter* has in his possession several heads that were so diseased ; but I do not know we have a history of one equal in size to this in a child so young.—*Ruysch* in his *Thesaurus Anatomicus* has a surprising figure of one, in a *Fætus* of 6 or 7 months.

(*b*) Many Observators take notice of the *Spina bifida*, but more particularly *Ruysch* and *Tulpius*.—Doctor *Mackenzie*, a celebrated teacher of Midwifery in *London*, shewed me some years ago, among other
curious

curious things, a recent *Spina bifida* of a child of four months old, who died in convulsions; and some time before its death the lower extremities were become paralytic. When I visited this ingenious Gentleman, he had just finished an accurate drawing of this case.

A case in which the muscles of the eye-lids, and of the globe of the eye, were affected in a singular manner; the globe of the eye was immoveably fixed, the upper eye-lid cou'd not be raised, by the muscular power, in the least degree, and when lifted up, the pupil appeared much dilated, and the patient saw objects double.

IN *May* 1760, I was desired, by a very ingenious Apothecary, to visit a Gentleman in the City of *Norwich*, near 50 years of age, who had long been subject to a leprous eruption upon his arms, and had been about two months under his care, for this disorder of his eye. He had given him some mercurial purges and antiparalytic remedies, under which course the complaint rather increased; however I still recommended *Calomel*, rubbed with *Sulphur*, to be taken in small doses, as an alterative, every night, and a gentle purge every fifth
or

or sixth morning; and at the same time he took an electuary with *Valerian* and *Cinnabar* of *Antimony* twice or thrice a day, washing it down with *Infus. paralytic.* of *Quincy*, and had his eye well fomented as often, with the *Fot. commun.* made with the addition of *lavender* and *rosemary*, adding to the liquor a portion of *Spirit. Mindereri*. In about three weeks there appeared a visible amendment, by his beginning to raise the eye-lid, and to move the globe a little: and by a regular perseverance in this method, he was perfectly cured in less than two months, of this very alarming complaint; during which time the cutaneous eruption also vanished. He then took an electuary composed of the *Bark*, *Valerian*, and *Cinnabar*, and drank liberally of *Decoct. Lignorum*, washing his eye well morning and evening, with cold water and a sponge, for some weeks; after which he used a cold bath with advantage, and has had no return of either disorder.

In the same year, a Clergyman about the same age, but of a stronger constitution, fell under my care in a similar case in respect
to

to the eye ; and said he used likewise to be afflicted with scorbutic and nervous complaints. By the like treatment, and in about the same space of time, he was also perfectly cured.——Having never met with the history of such a case in any Observer, nor seen the like before nor since, I apprehend they may be very rare.

A case shewing the singular good effect of *Merc. sublimat. corrosiv.* in an inveterate *Ophthalmia*.

E. D. of N. aged 53, a man of great temperance and sobriety, born of healthy parents, and who, in the former part of his life, had enjoyed a good state of health, was seized in the beginning of *January* 1756, with a fever, attended with a violent pain of his head and inflammation of his eyes, to a high degree, the *Tunica conjunctiva* looking like flesh ; and he was totally deprived of sight.

THE common treatment of inflammatory diseases was regularly observed, which removed his fever, without affording any considerable benefit, in respect to the *Ophthalmia*. He told me he had been let blood fifteen times, besides having had the temporal artery once opened, and leeches often applied to his temples ; that he had taken a great many medicines, and used various applications, none of which means, he said, gave him more than a little temporary relief.

WHEN

WHEN the disease, in all appearance, was become local, no more than a slight pain of the head attending the inflammation of his eyes, he was put into a mercurial course, by the advice and direction of an eminent Physician, and took about thirty small doses of *Merc. dulc.* rubbed with *Sulphur*, interposing a lenient purge at due intervals, in order to prevent a *Ptyalism*, observing a very exact regimen all the while; but this method, though it was evidently of some service, yet did not cure him.

SOME months after this mercurial course, he was admitted into Mr. *Fellowes's* Infirmary, his eyes being in as bad a condition as ever, unable to distinguish any object, or to bear the light without great pain. Though powerful and regular methods had not answered the end, yet rather than abandon the poor unhappy man to despair, I proposed to the consideration of the Physician, whom I have mentioned on this occasion, the trial of the mercurial solution, as directed in the *London Medical Observations and Inquiries*, which he very readily approved.

AFTER

AFTER letting the patient bleed, and giving him a gentle purge, I began with *Merc. sublimat. corrosiv. gr. ̄* dissolved in ʒss of brandy, and ordered this dose of the solution to be taken morning and evening, mixed with a quarter of a pint of barley-water, directing him to live upon a cooling diet, and to drink barley-water with milk, and such kind of liquors very plentifully. The first dose made him a little sick and giddy, in about ten minutes he grew hot, and soon after fell into a moderate sweat, which continued some hours; the next dose had the same effects. When he had taken a few doses of this medicine, it neither made him sick nor giddy; but then, besides heating and sweating him, it increased the secretion of urine, and generally gave him a stool or two extraordinary in 24 hours.

IN five or six days he found his eyes easier, without being so much closed as usual with gummous matter in the night; and I observed they were very evidently less inflamed. About this time he had an universal itching, attended with little eruptions upon the skin, but these symptoms were of short duration.

WHEN

WHEN he had taken the medicine ten days, as it neither made his mouth sore, nor produced any symptoms to forbid the continuance of it, I increased the dose to half as much more ; and, a few days after, doubled the first quantity, which caused some pain with throbbing of his head ; but it soon went off, and the following doses did not affect him more sensibly than the lesser had done.

IN less than a month the patient appeared perfectly cured ; he declared that he had no manner of uneasiness of his eyes or head, and found himself well as to his health, in all respects. The Physician, whom I advised with concerning the use of this medicine, and a very judicious Surgeon, examined his eyes with me, and cou'd not discover the least appearance of inflammation ; however, I kept him a little longer in this course.

DURING the exquisite pain and sensibility, I ordered the eyes to be very frequently well washed with *Emuls. commun.* and *Ju- lip. e Camphora p. æ.* moderately warm, with a piece of the finest sponge ; and with
warm

warm milk and water in a morning, to clear them from the gumminess contracted in the night, using the following *Collyrium* afterwards, when the eyes were in a condition to bear it.

R Julep. e Camphora ℥viij
Aq. Rosarum ℥iv
Spirit. Mindereri ℥ij m.
℞ per chartam filt.

To this I also added, occasionally, a few grains of *Sacchar. Saturni. vel Vitriol. alb.*

WHAT seems to us most observable in this case, is the effect of the *Merc. sublimat. corros.* after regularly persevering in the use of the *Merc. dulc.* to little or no purpose. We were inclined to try the power of this medicine, in some hopes of finding its efficacy not peculiarly confined to the correction of the venereal *virus*; on which account it has been found singularly efficacious, as has been sufficiently experienced, when continued a due time; and its sudden good effect, in this case, was a circumstance that greatly as well as agreeably surprised us, giving us better reason to hope it may
 prove

prove of more general use, in some other obstinate obstructions in the *Vasa minima*, when other mercurials fail (a)

A SHADE made with stiff paper, covered with green silk, shou'd be constantly worn, to defend inflamed eyes against the rays of light making too strong an impression upon them ; and no bandage to keep the lids close together shou'd be used ; as confining the tears, &c. will add to the disorder, by making any fluids therein contained, more acrid and irritating : for the same reason frequent washing with proper *Collyria*, that do not excite pain, prove very beneficial ; and when the eyes are exquisitely sensible of pain in inflammations, the patient's room shou'd be darkened.

(a) Mr. *Sainthill*, a gentleman of a very amiable and communicative disposition, to whom I am much obliged for his friendship in many instances, told me some years ago, that when he was a young man, Mr. *Herenden*, then an old and eminent practitioner in *London*, assured him he had, throughout the course of his practice, frequently used a solution of *Merc. sublim. corrosiv.* with very good effect in venereal complaints ; and that he himself had also done the same, it is therefore not to be considered as a new medicine.

Another case, in which *Merc. sublim. corrosiv.* remarkably succeeded, after the use of *Merc. dulc.* in an opacity of the eye.

A YOUNG Gentleman who was born blind of one eye, had the other begin to grow defective, without any visible cause, at 17 years of age; and notwithstanding the care and attention of an able Surgeon, who, with the rest of his treatment, purged him with *Merc. dulcis*, he soon lost his sight to such a degree, as not to be able to distinguish objects. At this time I was consulted, and we observed the eye had lost its lustre, attended with a great dilatation of the pupil; but we cou'd not precisely determine what parts of the eye were affected, nor give a specific name to the disease, from its appearances, yet were apt to think the very fine membranes, enveloping the crystalline and vitreous humors, might be rendered opaque.

WE agreed to put a seton into his neck, and to give the mercurial solution, as directed

ted in the preceding case. In a few weeks he was evidently better, in all respects; and in about two months, his sight was perfectly restored, and his eye recovered its pristine lustre and appearance. It is now more than two years since, and he has had no relapse.

See Baron Van Swieten's letter to Dr. *Silvester*, in the 2d vol. of the *London Medical Observations and Inquiries*, written in the year 1758, concerning the use of *Corrosive Sublimate*, in the cure of opacity of the eyes.

Of an uncommon periodical blindness, and a Nyctalopia.

A WOMAN aged 21, healthy in all other respects, and very regular in her menstrual returns, had a slight inflammation upon the edges of her right eye-lids, which was soon removed by bleeding, gentle purging, and common applications: after this, the sight of that eye, without any disorder upon the other, went away for the space of an hour or two, or more, every day, at no determinate time; but in about a year she became totally blind of it, and a great enlargement of the diameter of the pupil remained. No uneasiness attended the eye, except that about five minutes before the going away and return of sight, she complained of a very acute pain in it; which circumstance was invariable: the return of sight was not gradual, but with a sudden flash of light, upon which she was able to read instantly, in a book of a common print, with the other eye shut.

AFTER the total loss of this eye, the other remained perfectly well about three months,

months, when it began to be affected in the same manner as the other had been. Two months after, which was on *May* the 29th, 1764, when I first saw her, she gave me the preceding relation : she is a woman of veracity, and a very intelligent person confirmed what she said. At this time she was generally blind six or eight hours in the twenty-four ; in a few weeks the blindness increased to twelve, her sight departing about 8 or 9 at night, and returning near the same hour in the morning ; this was the course of the disorder, with little variation.

VENESECTIION, opening the temporal artery, vesicatories applied behind her ears, a seton in her neck, purging with *Merc. dulc.* with the observance of an exact regimen had no effect.——When the returns of the disorder became regularly periodical, the Bark was also tried, and afterwards cold immersion, but to no better purpose.

THE mercurial solution seemed to have some good effect in this singular case ; during the use of it, the sight returned, tho' for a few days only, to the eye which had been long blind, and the periodical returns of the disease kept entirely off about six

weeks, which we ascribed to this medicine, no other means being made use of at the same time. It was left off on account of its disagreeing with her stomach, and the disorder soon returned ; had it been longer and regularly persevered in, perhaps it might have effected a perfect cure : however, in length of time, without taking any other medicines, the disease gradually went off ; and she now sees very well with one eye, without having once lost the sight of it for some months.

WHEN she lost her sight, I cou'd discover no defect in her eye, only a dilatation of the pupil, as we observe in a *Gutta serena*.

Of a disorder in the *lachrymal Sac* of many years standing, in a scrophulous habit.

SOME years ago, a young lady was sent to me out of the Country, when I dwelt at *Norwich*, with a tumor at the corner of her eye upon the *lachrymal Sac*, in an inflamed state ready to burst, and by pressure, purulent matter appeared through the *Puncta lachrymalia*; and under these circumstances it was agreed in consultation to open it directly. The operation was performed in the common manner, beginning the incision just beneath what is called the tendon of the orbicular muscle; and after amply dividing the *Sac*, I fortunately discovered the *nasal duct*, with a very fine probe, without any difficulty, and immediately introduced, as easily, a piece of bougie I had provided for that purpose. By this means the natural opening for the passage of the tears afterwards, was effectually preserved during the cure of the wound, which was completed in about a month, with no more blemish than the appearance of a small smooth cicatrice :
the

the tears also readily found their course thro' the *Puncta lachrymalia* and *ducts*, so that not the least portion of them ran down the cheek ; and she remains perfectly well, due regard having been paid to the original cause.

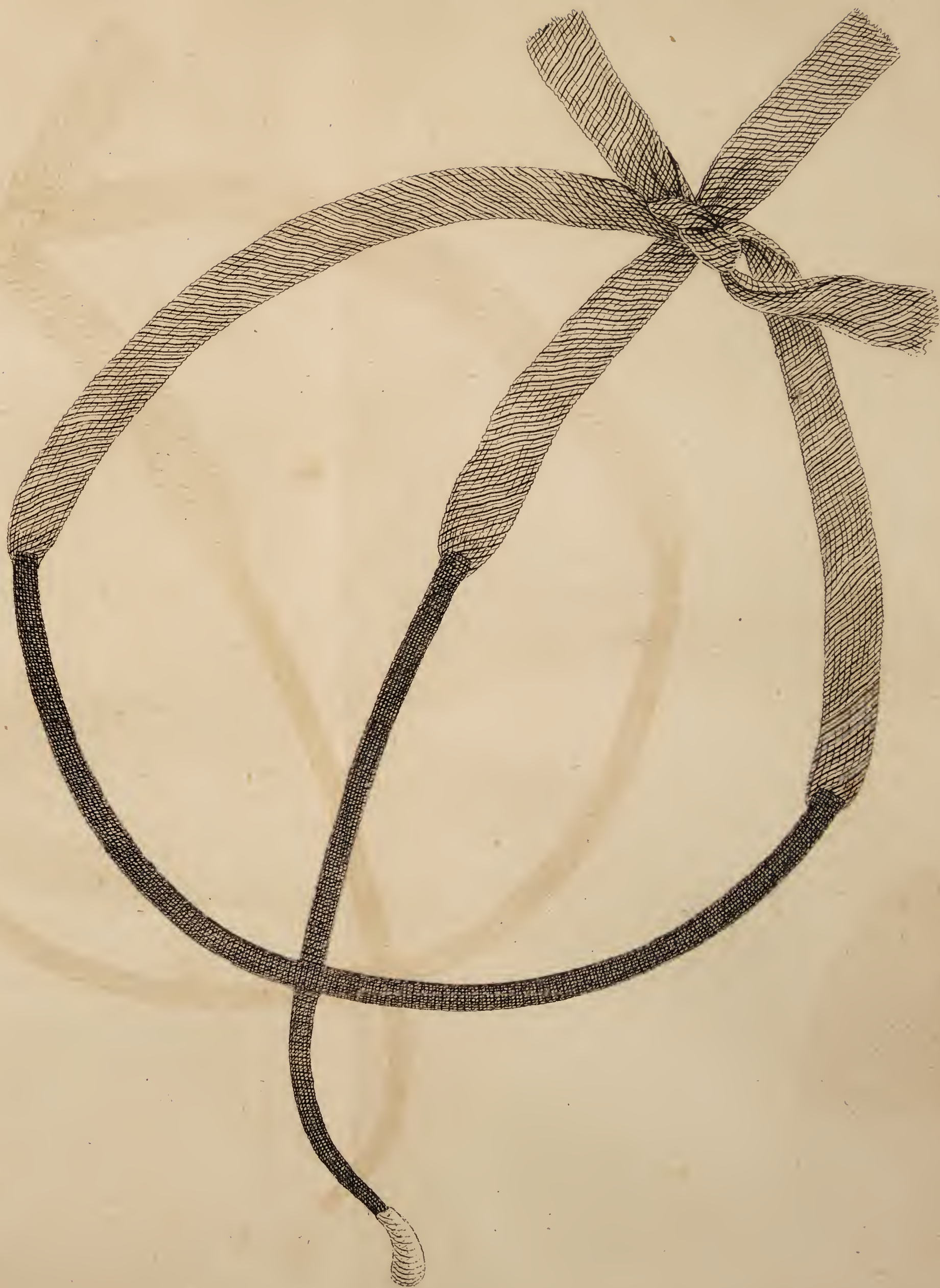
HAD not the bougie answered the end to my wish, in keeping open the *nasal duct*, I shou'd have drawn a seton through the nostril. Towards the conclusion of the cure, and when the wound is quite healed after this operation, gentle pressure by the simple machine, represented in Pl. III. which any common workman is capable of making, may prove beneficial ; and in some cases its timely use may render the operation needless, by preventing farther distention of the *Sac*, and restoring its tonic power or elasticity, in case the fluid in it is not become at all purulent, and the *ducts* remain open. It will be proper to use some astringent lotion at the same time ; taking particular care to have the machine well adapted to the part, and that it be constantly worn a due time. It shou'd also be remembered, whenever it happens that the machine has been off any considerable time, to press the fluid well out
of

of the *Sac* with the finger, before the application of it again. However, this is a disease which demands the Surgeon's nice attention in the different stages, as we may be well informed, by Mr *Pott's* treatise on this subject. (*a*)

I THINK this machine made of well tempered iron, of such substance as will admit of bending easily with pliers, if not with the fingers alone, to adapt it exactly to the part, is preferable to that which has a screw affixed to the pad, and not so apt to slip from its place. It is to be covered with velvet or silk : the pad, formed of due dimensions and prominence, shou'd be stuffed with cotton for the greater ease, and covered with oiled leather ; but after all it will be proper to defend the part still farther against chafing, by a bit of common plaster, renewed as often as it grows stiff and hard. The end of the ribband, which passes over the
top

(*a*) Professor *Monro's* Essay upon this Subject, in the 2d Vol. of the *Med. Essays* ; and also several published in the 2d Vol. of the *Mem. of the Royal Acad. of Surgery*, deserve reading with particular consideration.

top of the head, is to be confined under a knot made with the other ribbands behind it, and then reflected and pinned upon itself. In fixing the machine to give the pad a proper degree of pressure and easy regular bearing, the utmost care is required ; for upon these circumstances absolutely depends its success.



Of dangerous *Hæmorrhages* at the nose restrained, by a method not generally practised, when other attempts had failed.

I WAS called three times, in one hot summer, to persons in *hæmorrhages* from both nostrils at once ; by the long continuance and profuseness of which, their lives were evidently brought into imminent danger, notwithstanding the various applications, and other proper treatment of good Surgeons to suppress the bleedings. In these alarming cases, as it cou'd not be precisely determined from what part of the nostrils the blood flowed with such impetuosity, tents made with pieces of bougie, having long lint wound round them, after being jagged to prevent its slipping off, then moistened in the white of an egg beaten, and rolled in fine flour mixed with about $\frac{1}{2}$ of powder of roman vitriol, were gently thrust into the whole extent of those passages,

passages, to the posterior nostrils ; and there left for some days, till the moisture of the parts loosened them enough to be extracted without force.

THE nostrils were kept pretty strongly pressed together at first, for some hours, with the fingers and thumb, upon a compress dipped in cold vinegar, and renewed as often as it grew warm. Before the introduction of the tents, bougies were passed quite through to open the canals, and direct the length and curvature requisite to be given them. By attending to these circumstances they were introduced with very little difficulty or pain to the patients, who were then ordered to gargle their mouths and throats frequently with red wine and water, as long as shou'd be found necessary, to remove the inconvenience arising from the solution of the vitriol falling into the throat from the posterior nostrils ; and the tents were kept securely in the parts by a compress and proper bandage under the nose. The patients were kept very quiet
in

in all respects, and all due regard paid to diet, &c. (a)

(a) I have found such kind of treatment of great use after extracting *Polypi* out of the nostrils.— Early in the last century, *Glandorpius*, a practitioner of great eminence at *Bremen*, wrote a learned treatise upon *Polypi*.

A remarkable case of matter long retained in the *Antrum Highmorianum*, or *Maxillary Sinus*.

September the 1st, 1759.

A REPUTABLE Tradesman, in the fortieth year of his age, who had always lived a regular, temperate life, but had not a good constitution originally, and had long been subject to a variety of complaints, asked my opinion concerning a tumor upon his cheek, of about three years standing, which had been attended for a considerable time, with a frequent discharge of purulent matter, not only through one, but both nostrils, the *Septum Narium* being eroded. The whole side of his face was also affected at times with acute pain extending to the head, and the eye was often thrown into spasms to a great degree, which rendered him unfit for business, and his life very uncomfortable.

THE Surgeons whom he had consulted, in the Town where he dwelt, were unacquainted with his disease. Being a very intelligent, apprehensive man, I endeavoured
to

to make him sensible of the nature of his complaint, and shewed him the necessity of having a tooth extracted, corresponding with the *Sinus*, and then to have a perforation made into it, in order to obtain a free discharge of the matter, at this depending point, and give opportunity for dressing, and making such applications to the affected parts, as they shou'd require: however, when he returned home, and delivered my opinion to the Surgeons, they did not acquiesce in it, but advised other measures, which cou'd not succeed.

Two years after, he applied to me again, in a much worse state than when I first saw him, most earnestly entreating me to take the care of him. Considering all circumstances, I refused being concerned without a consultation; after which, in the presence of an able Surgeon, I extracted two teeth, in order to make an ample opening into the *Sinus*; upon doing which with a small chisel, first making two perforations with a large awl, a great quantity of pus, intolerably fetid, was discharged, and the violent pain of his face, and the spasms of his eye, immediately ceased.

THE membrane which lines this cavity was destroyed, and the bone carious in many places, in consequence of the long detention of the matter ; but in length of time he was cured, by injections of *Aq. Calcis*, *Tinct. Myrrhæ & Mel rosac.* with such kind of applications, after having many exfoliations, and enjoys a better state of health than he did before this disorder. As he was of a lax and hectic habit, the Bark, Elix. Vitriol, Afs's milk, and exercise on horseback, long persevered in, proved very beneficial.

I have been concerned in six cases, besides this, where matter was formed in the *Maxillary Sinus*, in consequence of inflammation, attended with great pain, all which were cured by such kind of treatment as has been mentioned ; but the matter was not discharged by the nose, through the communication with that cavity, nor was the bone so affected, in any of the other as in this, they being of short duration before the openings were made.—See *Monro's Osteology*, concerning the communication between the *Maxillary Sinus* and the nose.

A Person restored to sight from almost total blindness of both eyes, by the use of the Solution of *Merc. sublimat. corrosiv.*

AFTER these papers were sent to the press, a Surgeon at *Halesworth* in *Suffolk*, brought to me at Doctor *D'Urban's*, a Gardener, who some time before had received a violent blow with a man's fist upon his right eye, which caused such an opacity of it, as excluded the rays of light: and what added, in the highest degree, to this poor man's calamity, whose labor was necessary for the support of his family, was, his having also lost all useful sight of his other eye, a great many years, by the like accident, as he informed us, notwithstanding the utmost care of a good Surgeon to prevent it.

IN the present case other proper means having also proved ineffectual, I strongly recommended the trial of the mercurial

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Solution,

Solution, from the extraordinary efficacy I had observed of it ; but did not the least expect it wou'd have any effect upon the old case : however, in a few weeks he began to be more sensible of impreffions from luminous bodies in that as well as in the other eye ; and after a regular perseverance in the use of the medicine about two months, he was restored to such a degree of sight as to enable him to write legibly and to pick up pins thrown upon the floor, which proofs he gave us ; but what astonished us most of all, he positively declared that he cou'd see better with that eye of which he had been long blind than with the other.

THERE still remain partial opacities in both eyes, and the visual rays not entering in their true direction, nor being properly refracted, vision is indistinct and imperfect. He sees objects to the greatest advantage when he looks down upon them.

DURING the use of the medicine he was let blood now and then, lived upon a cool diet, had his body kept open, and drank proper diluents very liberally ; a seton was
also

also drawn into his neck ; from which I have often seen very good effect in inflammations of the eyes. (a)

(a) I have seen singular good effects from giving a medicine of this nature, in very small doses as an alterative, in other as well as in these and venereal cases, by continuing it a long while, where I have had reason to believe the cause of the disease was an obstruction of the minutest order of vessels ; preparing the medicine in such a manner as to be given by drops, in some appropriate vehicle agreeable to the stomach, observing the same general rules that have been mentioned during the course. From my own experience I am convinced, the most proper time of taking this medicine in such cases, is at the patient's going to bed ; it generally raises a gentle *Diaphoresis*.

A glandular tumor extirpated successfully, which had been growing more than twenty years to the circumference of 14 inches, extending from the root of the ear unto the cheek, and far down the neck.

IN the beginning of *June*, 1757, Mrs. B. of A. about forty five years of age, and healthy in all other respects, first asked my advice in this case ; afterwards, in a consultation of a Physician and four Surgeons besides myself, it was unanimously agreed, from the threatening aspect of the tumor, that the operation was advisable, without any farther delay, though the season was unfavourable, on account of the excessive heat of the weather.

THESE Gentlemen attended the operation, *July* the 11th. The tumor required to be dissected off with great caution, to avoid the subjacent blood-vessels ; not one of which was opened of any dangerous consequence,
nor

nor did the division of the *salival duct* prove any obstacle to the healing of the wound, by the usual treatment.

WE examined the tumor after it was extirpated : the glandular substance of it was in a scirrhus state, and in the superior part, immediately under the skin, which was of a dusky red colour, and ready to burst, we found about a quarter of a pint of a blackish, oily fluid, where we had observed a fluctuation before the operation.

It may not be amiss to observe, that when we may reasonably suppose we have effectually stopped the *hæmorrhage*, by ligatures or otherwise, after any operation, wherein many considerable blood-vessels must unavoidably be divided, it will even then be prudent to wait a little while, and shou'd the patient grow faint, till the pulse rises, before we finish the dressing of the wound ; lest any retracted vessel, which may have escaped our notice, shou'd bleed soon after. This accident has often happened through haste and inattention ; and whenever it does so happen, it will occasion the more trouble, besides alarming the patient and by-standers, to our prejudice.

Since I was obliged to retire from business on account of my valetudinary state, Mr. *Garneys*, a Surgeon of character at *Yoxford* in *Suffolk*, brought a patient to me at *Halesworth*, after these sheets were sent to the press, in a similar case, and about the same standing as the preceding, only the tumor was not quite so large. I advised excision in this case, as the only expedient, and the operation succeeded as happily.

An *Exostosis* of the lower jaw-bone of an enormous size.

A WOMAN between two and three and twenty years of age, who had been servant to the last mentioned patient, came to ask my opinion concerning this extraordinary swelling, after having been more than a year in the hands of an ignorant and impudent pretender, who, by promising a cure, had got all the money she had. The bone was enlarged in its whole substance uniformly from the angle to the chin, very prominent, and measured 15 inches in circumference from those points. Notwithstanding its size it occasioned very little impediment in the motion of the jaw, but mastication of her food was wholly performed on the opposite side. Her complexion denoted high health ; and she was very strong and vigorous, without any other complaint whatever ; nor was the tumor painful, which had been growing to this magnitude between two and three years. There had been no manifest increase of it, for some months

months before she came to me, and when I saw her some years after, I discovered no alteration in it.

Two years ago I was consulted by a gentleman, who was pretty far advanced in years, and had for some time complained of pain upon his left temple, ear, and adjacent parts, which was now increased to such a degree as to require the constant use of opiates, in large doses, to assuage it. In this case, wherein we found the whole *Os Temporis* considerably swelled, we thought it most expedient in our consultation, to advise only a palliative method. The patient not long after fell into a delirium, and died in strong convulsions. Leave cou'd not be obtained to open his head after death, to inspect the state of the brain, &c. (a)

(a) See Monf. *Petit's* Traite des Maladies des Os, Chap. xvi. de l'Exostose & de la Carie.

An extraordinary caries of the lower jawbone.

SOME years ago I was sent for to a Lady about sixty years of age, who in a fever accompanied with a violent fit of the tooth-ach, had a carious tooth extracted ; in consequence of which very great inflammation and swelling seized the whole side of her face, and terminated in an abscess. When I was called to her about six weeks after, upon passing a probe into the socket whence the tooth was extracted, it went quite through the bone, without any resistance, to the skin below. In that depending part an incision was made of a suitable length to lay the superior part dry, by giving a free exit to the matter, which was very fetid and acrid ; then the gum on the inside was separated from the carious bone, and the loose teeth removed. By dressing the parts according to the general rules

rules of Surgery, nature cast off, in about two months, as much of the whole substance of the bone at once as contained five teeth, making good the loss with an osseous substance, which afterwards became so firm that she cou'd chew upon it.

A species of tumor called by the common people the Mumps.

EARLY in the spring after the hard winter in 1739, the severest in the memory of man, this disease appeared, which I had never seen nor read any description of.

It began with a slight fever; the face and throat swelled soon after, looking of a little deeper colour than a damask-rose; but the tumor seldom extended so far as the eyes. It was chiefly external; and sometimes, in a few days, it increased to such a prodigious size, as to obliterate the features, and put the patient out of knowledge of his most intimate acquaintance: yet that quick and extraordinary distention of the parts was, in general, attended with but little pain.

THE disease was chiefly among children, and young persons of the poorer sort. The general *antiphlogistic* method succeeded very well. It was rarely mortal, and seldom terminated in an abscess; but when that happened, it healed kindly by the common treatment.

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IN five or six cases wherein I was concerned, the tumor in the face, &c. subsided in three or four days, and the peccant matter was from thence immediately translated to the testicles; but this circumstance required no alteration in the general method of cure.

IN some, a thickness and hardness remained upon the *parotid* and *maxillary* glands, after they were well in every other respect; which I found readily yielded to small doses of *merc. dulc.* with gentle purging at proper intervals, keeping the affected parts moderately warm, and the patient to a suitable regimen, during the mercurial course; and sometimes I used a mild mercurial ointment.

THIS disease continued ripe all the summer season, which was remarkably cold, dry and unfruitful, and did not intirely disappear till autumn 1741.

The summer after the disappearance of this disease, the malignant sore throat, which has lately been accurately described by three very learned Physicians, as it was by *Aretæus* two thousand years ago, first appeared in this kingdom, and continued more than ten years before its total disappearance, in that part of it where I then dwelt, about ten miles from the City of *Norwich*; but it was not equally violent during the whole of that time, it raged and was most mortal in the years 1745 and 1746. I attended a great number in it,

it, and, from what I observed, there appeared some analogy between this disease and that among the horned cattle ; which began, in this island, in the year 1715, continuing more than 40 years. *Bonetus* taking notice of such a disease in the throat, says it was preceded by a plague among that species of cattle ; the *pathognomonic* of which also appeared in the throat.—— The celebrated Monsieur *Le Cat*, Doctor of Physic and Surgery at *Rouen* has also written upon this subject.

A glandular tumor, situated under the ear upon the articulation of the jaws, successfully extirpated.

June the 1st, 1755.

MR. J. B. of O. aged about thirty, a gentleman of a lively temper, but not of a good constitution, had this tumor gradually growing three or four years, from a very small beginning, to a considerable size ; and its increasing exceedingly in the last ten or twelve months, affected his mind very much, making him more than ordinarily anxious about the removal of it.

WE were of opinion in consultation, that the operation was practicable ; and after the patient was duly prepared, I performed it, with greater ease to him and less trouble to myself, than I expected ; for, upon removing an oval piece of the teguments, and laying the glandular substance in view, I found it so disengaged from the circumjacent parts, that I turned it out with my finger, having very little farther use for the knife.

THE wound discharged, during the cure, a great quantity of saliva, especially upon mastication, which was avoided as much as possible, by the nature of the food he was allowed.

WHEN the wound was contracted into a narrow compass, I directed a strong elastic steel machine, resembling that contrivance which is made use of to keep the wig close to the ears, with a soft pad to press upon the aperture of the salival duct, and rest upon the opposite temple; by which means and dressing but seldom, with lint moistened in *Alcohol*, and a common plaster, it was soon perfectly healed.

THE machine, as described in plate 4 fig. I. was kept in its proper position, with a ribband passing behind the head, from one branch of it to the other, and another ribband affixed to that behind the head, in the middle, and to the machine on the top of the head.

A violent extension and contusion upon the muscles of the neck, attended with uncommon consequences.

May the 3d, 1755.

THE daughter of H. L. of S. was thrown backward off a horse, and received an extension and contusion upon the muscles serving to draw the head backwards. When she was brought to me, her chin was fallen upon her breast ; and from the friction by an involuntary and constant vibrating motion, the skin was fretted off both these parts ; which, with the pain she suffered upon the posterior part of her neck, made her life very uncomfortable.

VARIOUS applications and bandages had been tried for two years, to no purpose. I gave directions for making the machine in plate 4, fig. II. by the use of which alone, the relaxed parts recovered their tone and action, and she was perfectly cured in six months.

months. By the same contrivance I have since cured a similar case of a year's standing, only the oscillation of the head was not so much.

A MACHINE of this kind, with a branch to pass up on each side of the head, may prove useful to keep the head and neck in their true direction, after the operation for the wry-neck; and, perhaps, answer the end better than the technical bandage used on that occasion; but I cannot recommend it with certainty, having never had an opportunity of experiencing its use in that case: yet, in several instances, where there has been such an effect produced by rigidity or debility of the muscles, and the operation impracticable, I have found it very beneficial; particularly in one, where the disorder proceeded from a distortion of the *cervical vertebrae*, with a great thickness of the muscles in consequence of a fever. I was consulted in this case, when the Surgeons concerned had determined to divide the *Sternomastoid* muscle, which appeared to me not the least affected; but convincing them of their mistake, the performance of an operation was prevented, that must have proved very injurious.

Of a
distorted
neck.

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IN this case I directed the machine to be so constructed, that the patient received necessary support from it, with liberty of moving the head in proper directions, which motions I earnestly advised shou'd be frequently performed, and that a small quantity of the following Liniment shou'd be well rubbed into the rigid parts twice a day with a warm hand, keeping them warm with flannel : and this method was attended with such good effect, that in about six months the disorder was scarce perceivable.

R. Medull. rec. & moll. Crur. bovin. ʒj.

Unguent. cærul. mit. ʒss.

Spirit. Sal. ammon. ʒij.

Ol. ex Pedib. bovin. rec. extract. q. s.

f. Liniment. relaxans.

I HAVE also cured a similar case very lately by the same method, after various other means had been used to no purpose.

PLATE 4. FIG. 2.

A. A. The fixed points to rest upon the top of the shoulders.

B. The branch to pass up the side of the head, and bear gently against it to keep it steady.

C. The branch to come forward for the chin to rest upon, having a soft concave pad annexed to it, moveable with a screw to raise the head gradually.

D. The bow to be placed behind the neck.

E. E. The straps of leather to pass from the shoulders under the arms and hang unto the pins f. f.

THIS machine may answer the end without the screw, as I have found, by making that limb of it properly tempered to admit of bending and standing firm to the part.

Fig. 1.

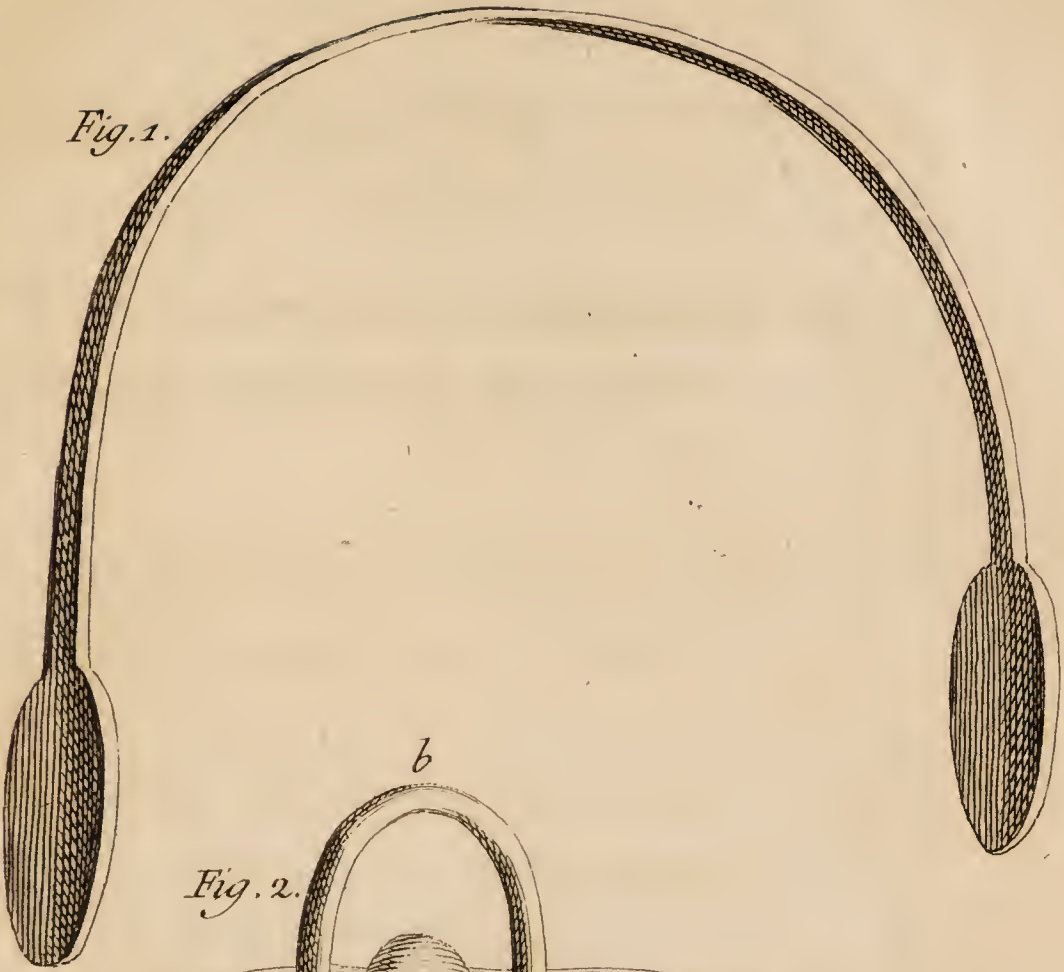
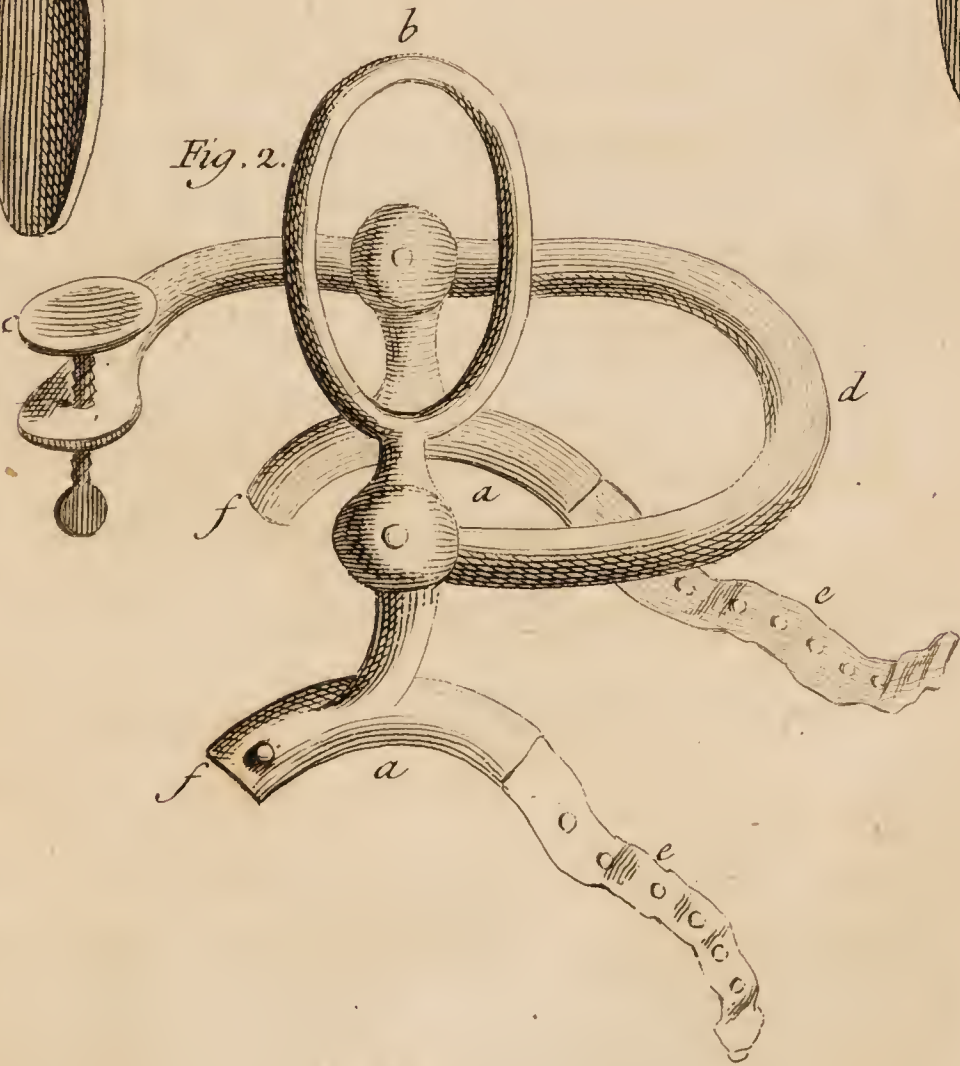


Fig. 2.



The following letter to my very good Friend Doctor *Monsey*, Physician to Chelsea-Hospital, gives an account of an unprecedented disease of the *Platysma Myodes* producing surprising effects and appearances.

Dear Doctor, *Norwich, December the*
10th, 1759.

I AM truly sensible of the honor you do me in desiring your relation, Mr. *Horncastle*, to ask my opinion in his son's case, which indeed appears to me so singular, in all respects, that I have never before seen any thing like it, nor can I find one similar to it in any book I have, ancient or modern ; and I am greatly at a loss to describe it, in such a manner as I wish to do, to give you a clear idea of it ; but I will endeavour to do so as well as I can.

THE young Gentleman is about 14 years of age, apparently of a strong constitution ; he was always healthy, and is so

now, except the odd complaint, of which you have had an imperfect relation from Mr. *W——*. The seat of the disorder is very obviously in the *Platysma Myodes*, which is become exceedingly rigid, and most so just beneath the jaw, to which it is attached, from the chin to the angle; the skin over it appearing like the cicatrice after healing a burn. This side of his face, quite from the point of his chin, is much shrunk, and drawn awry, by the contraction of the muscle, particularly the corner of his mouth, when he turns his head to the opposite side; a portion of this cutaneous muscle being attached to the *Sphincter Oris*. From the inferior part of the eyebrow, at the internal angle of the eye, to near the *vertex*, there is a kind of furrow upon the skin, about half an inch broad, having a shining, polished appearance, like a cicatrice in consequence of a wound, without any hair, which seems to be fallen off for want of nourishment; and from the corner of the eye downwards, there is the same kind of appearance in a less degree. (a) Violent spasms frequently return, beginning at

(a) See Plate annexed.

at the insertion of the muscle, and terminating at the eye, attended with great pain; and sometimes the ear, with the temporal and frontal muscles are influenced and affected in the like manner. The parts, according to the course of the insertion of the muscle into the jaw-bone, are considerably thickened, not the least inflamed externally, and but very little painful when touched, unless they are stretched at the same time. The subjacent muscles do not yet appear to be affected.

It is about three months since Mrs. *Horncastle* first took notice of this complaint, by the corner of his mouth being drawn a little awry; but the exact date of the disorder cannot be ascertained, any more than the cause whence it proceeds. This I have endeavoured to investigate, but at present it is too much concealed in obscurity for my penetration: perhaps it may proceed from the same cause, whatever that is, which produces the wry-neck, by bringing a rigidity and contraction upon the mastoid muscle.

86 CASES and REMARKS

THIS case appearing of such an extraordinary nature, I was desirous of giving the father and mother all the satisfaction that this place will afford, in a matter so interesting to them ; on which account we have had a consultation of a Physician and two Surgeons, of whose judgment I think highly. We entirely agree in opinion concerning the part affected ; and they do not remember, any more than I, to have seen, heard or read of such a case ; nor do they see any probable cause whence the disorder arises.—What is to be done in this doubtful matter, remains the point in question ; but no method will be put in practice, till I am favoured with your answer, which I beg to have as soon as possible, for my own satisfaction, and to relieve the painful suspense and anxiety, that fond parents must naturally have for an only child, and, in all other respects, a very fine youth.

WHAT is to be expected from other topical or internal medicines than have been used, I cannot say ; for the disease has not only resisted, but evidently increased, according to Mrs. *Horncastle's* observation, under
the

the rational methods prescribed by Doctor *T——r* of *L——n*, after he had seen, and strictly examined, the case, as you were informed by Mr. *W——ll*'s letter.—— Shou'd all other means that can be thought of, after giving them a fair trial, prove ineffectual to remove the contraction, what think you of a total division of the muscle transversely by incision, at the most rigid part just below the jaw? I proposed this method to the consideration of the Gentlemen in consultation, and they unanimously agreed with me, that it was not only practicable, in their opinion, but expedient shou'd all other attempts fail.

PRAY, Sir, consider the case yourself, and consult the most experienced Physicians and Surgeons of your acquaintance, upon this important occasion, in order to direct our unexperienced judgments the better, and furnish us, if possible, with precedents, and a method of cure that may be relied on, warranted by observation and experience, the best guides of all; in defect of which we shall be glad to know what are thought the most probable and rational means of curing

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curing or relieving the patient, in your and their opinion.

IF Mr. and Mrs. *Horncastle* find no reason to the contrary by your answer, which will be impatiently expected, she intends to come with her son directly, to put him under my care; but I did desire, thinking it must be more to their satisfaction and the child's advantage, that they wou'd carry him to *London* for advice and assistance, in such a singular case.

I HEARTILY wish you health, and am,

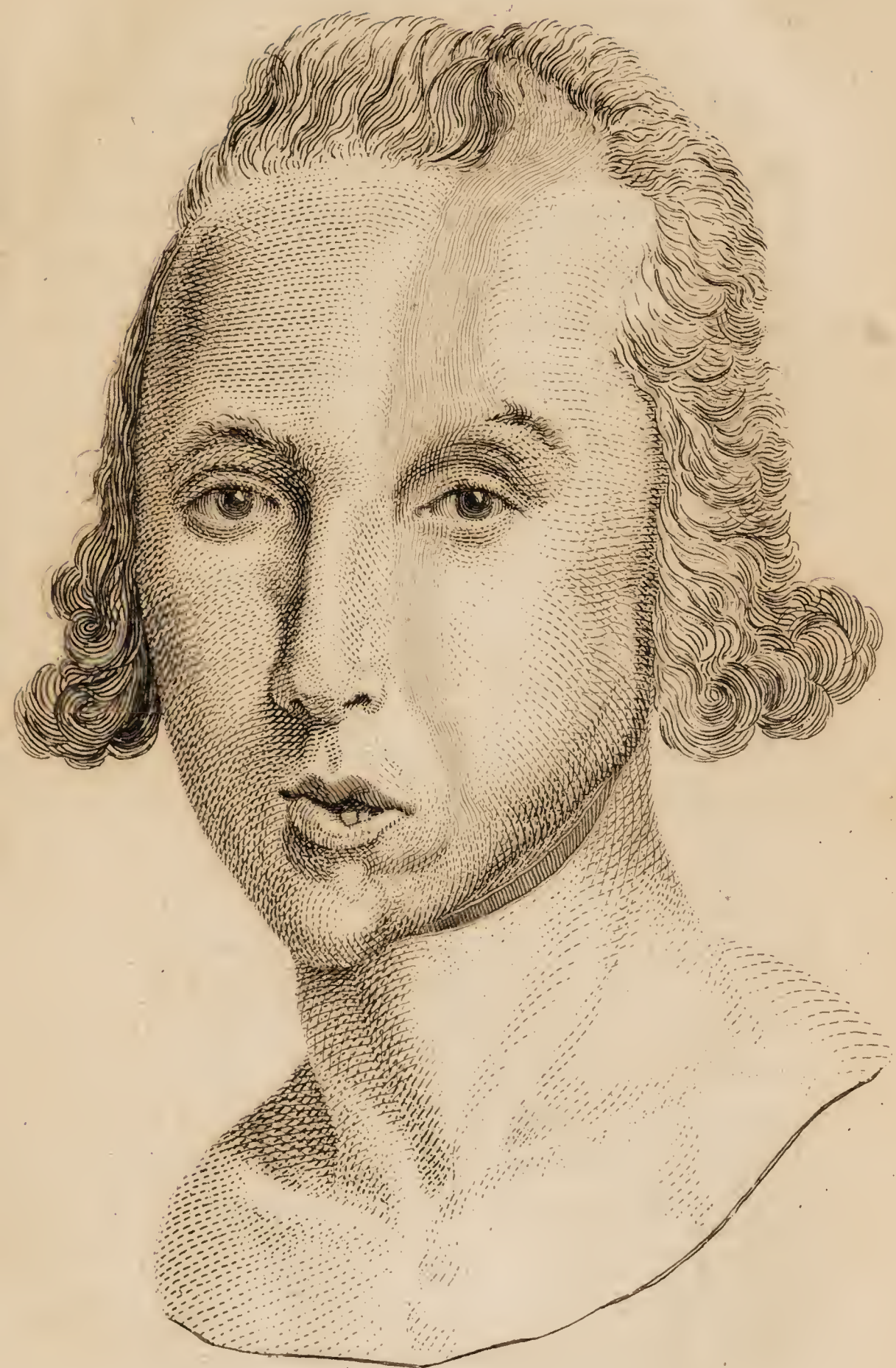
Dear Sir,

Your most obliged

humble Servant,

B. GOOCH.

DOCTOR



DOCTOR *Monsey* told me, in his answer to my letter, that the most experienced of the faculty, whom he had consulted on this occasion, in *London*, declared they were entire strangers to such a case. The method he suggested was approved in consultation here, and was very regularly followed for some months, in order to relax the contracted parts, &c. but to no better purpose than the measures taken before, the disorder manifestly increasing under all of them; from which considerations, it was resolved upon, to divide the muscle, as proposed in my letter. In the presence of the Gentlemen there mentioned, I performed the operation, by first dividing the skin and cellular membrane transversely, a little below the jaw, as represented in the plate, the whole breadth of the *Platysma Myodes*, the patient having his head rested, and steadily held against a person's breast, and the blood spunged up, by an assistant, as I proceeded. After laying this thin cutaneous muscle quite bare, separating the lips of the wound a little more than their natural recession, he was raised up, and turning his head towards the opposite side, it appeared as much confined as before, shewing the muscular

muscular fibres upon the full stretch, violently distorting the corner of his mouth: I then totally divided this muscle, bringing the membranes of the subjacent muscles in view, by a cautious dissection; after doing that, I desired him to turn his head again, and found it then had perfect freedom in its rotatory motion, without affecting the face or corner of the mouth, as it did before the division of the muscle. These gradual steps were intentionally taken to demonstrate the seat of the disease, that circumstance being doubted by some, who had examined the parts, and by others from a description of the case.

THE wound was healed by the common treatment without any ill accident supervening: after digestion, and the parts being in a state to admit of it without pain, I advised him to keep his head in gentle motion pretty frequently, in order to obviate the inconvenience of future rigidity or shortness of the muscle; which effectually answered the design.

THIS operation succeeded happily, in stopping the progress of the disease, and removing

moving the painful spasms immediately, without any return; but the side of his face, that was affected, still remains much less than the other: however, he now enjoys good health, and is able to bear long journies, with other fatiguing business, very well.

DOCTOR *Hunter*, to whose friendship I am under a great many obligations, saw this young Gentleman in *London* with Dr. *Monsey*, in the year 1765, and was so struck with the singular appearance of his face, that he expressed an earnest desire of seeing a history of the case, with a drawing annexed, representing the wound, &c.

See Plate 5.

An extraordinary case in a scrophulous habit.

June the 6th, 1758.

J. W. in the 25th year of his age, who, in his childhood, had been afflicted with a scrophulous disorder, but for many years past had been strong, and apparently healthy in all respects, received a hurt by a fall, upon the *clavicle* where it adjoins to the *Sternum*, and upon the *Sternomastoid* muscle at its insertion. The case was neglected for some weeks, when that muscle became rigid, swelled and painful quite to its origin; and a violent cough ensued, attended with great difficulty of breathing, and a fever, for which likewise no proper means had been used. He also complained of extreme pain upon the calves of his legs, the interior part of the right thigh, and the outside of the left: upon all which parts, hard swellings soon followed, that seemed to be confined to the muscles; besides which the inguinal glands, on the left side, were much affected. His blood was uncommonly

monly thick and fizy ; soon after being taken away, it appeared like a lump of glue ; the cohesion was so strong, as to admit of turning the porringer the bottom upwards without falling out, and it had very little serum upon standing. Bleeding was frequently repeated, lenient purgatives administered, and *nitre* given freely ; keeping him to an exact regimen, with the very plentiful use of common emulsion, pectoral emulsion, with *Sperma Ceti*, and other diluents of that nature. Cataplasms of bread and milk, fomentations and embrocations, of the emollient and anodyne kind, were applied to the affected parts without relieving his pains, which were very violent both day and night, but most in the night, having then always some increase of the fever : they were sometimes intolerable, requiring large doses of opiates to procure a little ease and rest.

AFTER about three weeks continuance in this deplorable state, I observed a manifest fluctuation in the tumor, the whole length of the mastoid muscle, which I opened by an incision of two or three inches long, just above the *sternum*, and discharged

a large quantity of a thin, fetid, bloody fluid; by which I discovered a deep and extensive *caries* upon that bone, and an unfathomable *sinus* underneath it, as well as the whole length of the muscle. After laying the carious part of the bone quite bare, I dressed it according to general rules, with *Tinct. Myrrhæ*, suppressing the fungous flesh occasionally, by touching it with the lunar caustic; and conveyed into the *sinuses* with an ivory syringe, some of *Belloste's* samaritan Balsam warm, having a small portion of *Unguent. e Gum. Elemi & Tinct. Myrrhæ* added to it, applying soft, even lint superficially, without introducing dossils into them; by which treatment the matter soon became better conditioned, and the quantity gradually decreased. For some time he constantly complained of the taste of the applications in his mouth upon dressing, and said he was very sensible of a kind of yielding in one part of the *Gullet*, when he swallowed his food; but I could never discover any perforation in that canal, by the passing of either meat or drink thro' the wound.

THE tumors upon his thighs and legs still remained hard and painful, without any external appearance of inflammation ; whence I concluded the inflammations were upon the investing membranes of the muscles, extending even to the cellular membrane which connects the muscular fibres together, the very bellies of the muscles seeming affected.

ABOUT a month after, there was a very sensible fluctuation from the hip almost to the heel, on the left side, still without any appearance of inflammation upon the skin ; which made several of the faculty agree with me in opinion, that the fluid had been contained in the membranes that envelop the muscles. In this space I made four openings, each about two inches long, at due distances, two on the thigh, and two on the leg ; by which an immense quantity of a fetid matter was discharged, resembling putrid *serum* and *crassamentum* stirred together, after standing some days in the air. After these openings were made, we strictly examined the parts, and cou'd readily pass our fingers into the very bodies of the muscles, where undoubtedly blood-vessels
were

were eroded, occasioning this appearance of the matter; and this examination confirmed the opinion we entertained before the openings were made. Next day I discovered a *sinus* from the superior part of the thigh, quite to the inguen, and another, from the same part of the thigh, through it, as far as the adipose membrane, just below the femoral artery, where I made another opening of the same extent. By these openings the matter passed off very freely: I dressed them superficially; and chiefly with pledgets of soft tow, moistened in a strong decoction of walnut-tree leaves moderately warm, as recommended by *Belloste* in his Hospital-Surgeon, after injecting into the *sinuses* a little of the balsam before mentioned; using expulsive compress and bandage, when the condition of the matter was changed, and the parts in a state to admit of union..

TEN days after having discharged those collections of matter, the tumors of the *muscul. gastrocnem. rect. & vasti.* on the other leg and thigh, having undergone

a similar change, were also opened amply on the depending parts : the fluid had exactly the appearance of that proceeding from the other, and the treatment after opening was the same.

BEFORE these tumors were opened, the constant pain and fever had emaciated the patient to a great degree; and after they were opened it was very much to be feared, the vast discharge from so many large cavernous ulcers of such a nature, wou'd have sunk him still more, and that he must have ended his life in a *marasmus* ; but the large depending openings, giving the matter a free and uninterrupted exit, together with easy dressings, as have been mentioned, succeeded beyond our hopes. The discharge from the different parts was soon moderated, and he was perfectly cured in about six months.

THE patient's diet was of the soft and most nutrimental kind, as good broths, milk, animal food of the easiest digestion, &c. and on account of the extraordinary depravity of the fluids and laxity of the

G

solids,

solids, the bark and elix. vitriol were taken as plentifully as he cou'd bear them, with small quantities of rhubarb occasionally, in order to prevent the inconveniences attending costiveness.

EARLY in this disorder, a remarkable dirty, sooty appearance over spread the skin of his body and limbs, almost every where, to a much greater degree than I ever saw, which gradually wore away, as he recovered flesh and strength, with a free perspiration.

HE is now a very strong lusty man, has the perfect use of his limbs, and performs his daily hard labor without any complaint.

Of an aqueous *Bronchocele*, or incysted tumor upon the *thyroid* gland, attended with singular circumstances, in a person about 16 years of age; for which case I am obliged to Mr. *Donne*, an ingenious Surgeon in the City of *Norwich*.

THIS patient was brought under Mr. *Donne's* care, *February* the 27th, 1760, and, at his desire, I visited him several times. After his death we dissected and examined the parts concerned, with the utmost attention, apprehending there was something very singular in the case, from the appearances in his life time, and it's surprising event; and then drew up the following history of it together.

THE tumor began many Years before application was made to a Surgeon, increasing very slowly; but, in the last two years, it grew from the size of a nutmeg, to that of a large hen's egg, compressing the *larynx*

and *trachea* so much, that in running or using any violent exercise, he breathed with great difficulty, and made a hooping noise in inspiration; his face was always of a dark-red color, like that of a person almost suffocated; his voice was weak, and talking constantly brought on a tickling cough. This swelling was affixed to the *thyroid* and *cricoid cartilages* and part of the *trachea*; it's external surface was unequal; it extended higher on the right side than on the left, having something of the lunated form of the *thyroid* gland; it's base was so large, that it covered the *carotid* arteries, and some part of it sunk below those vessels.

SEVERAL Surgeons, in consultation, were of opinion, that a fluid was contained in this tumor, consequently an opening was made, by which about three ounces of an aqueous fluid was discharged, and the patient considerably relieved immediately in his breathing; but the next day a violent fever came on, attended with great oppression of breath, a vexatious cough and a very irregular pulse. These symptoms were mitigated by bleeding, cooling and laxative medicines, &c. and the observance of a
strict

strict regimen of diet; but during their continuance, the surrounding parts felt emphysematous, without any appearance of the aqueous discharge from the wound, the whole surface of which was covered with a thick, viscous fordes. The fever subsided in about a week, but the tumor, from the first disappearance of the aqueous discharge, began to increase again; and in this short space of time it was grown nearly to the size it was before the opening; his breathing also became difficult and laborious, in proportion to the increase of the tumor. From these considerations, in consequence of another consultation, it was determined to make an opening on the opposite side, in the most depending part, and to draw a seton through the openings; a free discharge followed, and the patient's difficulty of breathing was relieved as at first; however, a fever came on again, with the same symptoms attending it as before, only in a more violent degree, accompanied with great pain and difficulty of swallowing: he spoke and breathed like a person in an angina, and there appeared little hopes of his recovery, for many days; when, moderate

breathing sweats, a copious spitting, a discharge of well digested matter from the wounds, and an abatement of the fever, by the former treatment, gave a fair prospect of success. The fever went entirely off soon after, and his breathing grew daily better, though he was not absolutely free from stricture upon the *larynx* and *pharynx*. Now, upon coughing, he threw up the cyst of a small hydatid, formed, we suppose by an obstruction and gradual distention of a lymphatic : upon which accident, notwithstanding Mr. *Donne* was in the room at the very time, and attempted to relieve him all he cou'd, he expired almost instantaneously.

THESE were the particular circumstances of this singular case ; which were easily accounted for, by examining and considering the state of the diseased parts. The *trachea* was so compressed and contracted in it's diameter, that any degree of irritation on the *glottis*, or a few drops of some fluid falling into the *trachea*, through the hole which will be hereafter described, where the tumor had a communication with it, might bring on a violent spasmodic stricture :
and

and probably this was the immediate cause of the patient's sudden death, by intercepting the air; for so long as the cyst of the hydatid remained in its situation, nothing cou'd pass from the cavity of the tumor into the *trachea*; but when that happened to be dislodged, some of the fluid might fall into it, and occasion this fatal suffocation.

IN order to a farther illustration of this very extraordinary case, we shall take notice of the particular appearances of the parts upon dissection, which were sent to Dr. *Hunter*.

THE tumor was situated under the *musculi sternohyoidei* and *thyrohyoidei*, which were considerably stretched, and their breadth so much increased, that they appeared like one broad thin muscle, covering great part of the anterior surface of the tumor, which laid obliquely cross the *trachea*, extending rather higher on the right side, as has been observed; its diameter transversely was almost three inches, in the opposite direction not quite so much; it appeared to take its rise from the right
side

side of the *thyroid* gland, lying upon part of the *trachea* and *thyroid* cartilage. The gland itself seemed to have been gradually dilated and extended over the cyst of the tumor, formed by cellular membrane; for the glandular substance and this cyst cou'd be separated a small space at the anterior part, where they soon became so intimately united, as to leave no distinction of parts; but more laterally, they did not so firmly adhere, as to prevent their being easily divided. The tumor was extended over, and attached to, almost $\frac{2}{3}$ of the *thyriod* cartilage, the whole of the *cricoid*, and six of the cartilaginous rings of the *trachea*, to which last it was very strongly connected; and arising from the *thyroid* gland on the right side as has been mentioned, it had forced the *trachea* considerably to the left; and as it's base laid over the *carotid* arteries, encompassing $\frac{3}{4}$ of the *trachea*, some part of it must consequently lie deeper than those vessels.

UPON opening this cyst we found it firm, and unequally thick, it inclosed the cyst of another *hydatid*, similar to that he ejected
by

by coughing, immediately before his death, only much larger, and quite disengaged from that proceeding from the cellular membrane, within which it was expanded. On removing the cyst of this *hydatid*, the hole appeared through both the glandular substance, and the other kind of cyst, admitting a common quill, which penetrated the *trachea*, between the first ring of it and the *cricoid* cartilage. The appearance of the preparation sent to Doctor *Hunter* was altered, in some respects, from that which it had in it's recent state, when the internal surface of the cyst produced by the cellular membrane, was full of small tubercles, covered with mucus, without any pus or sign of ulceration. In opening the *trachea* and *larynx*, the parts about the *glottis* and *ventriculi campaniformes*, appeared to be affected with a kind of anasarcaous swelling; and from the lower edge of the *cricoid* cartilage, to the eighth cartilaginous ring of the *trachea*, the right side of the canal had been so forcibly pressed upon by the tumor, that it nearly touched the opposite side.

REFLECTION.

THOUGH the situation of this tumor was a discouraging circumstance, to attempt the extirpation of it by incision ; yet, all things considered, with what appeared upon the dissection and accurate examination of the parts, we are inclined to think it highly probable, that had an oval piece, of a proper size, been taken out, from the top to the bottom of it, a cure might have been effected, notwithstanding the erosion of the *trachea* : and the success which has attended *Bronchotomy*, supports and encourages such procedure. :

Last year a Surgeon sent a patient to ask my opinion, concerning a tumor of this nature. I proposed to his consideration following the method just mentioned ; but the tumor being yet little or no trouble or inconvenience to him, I believe, nothing has been done.

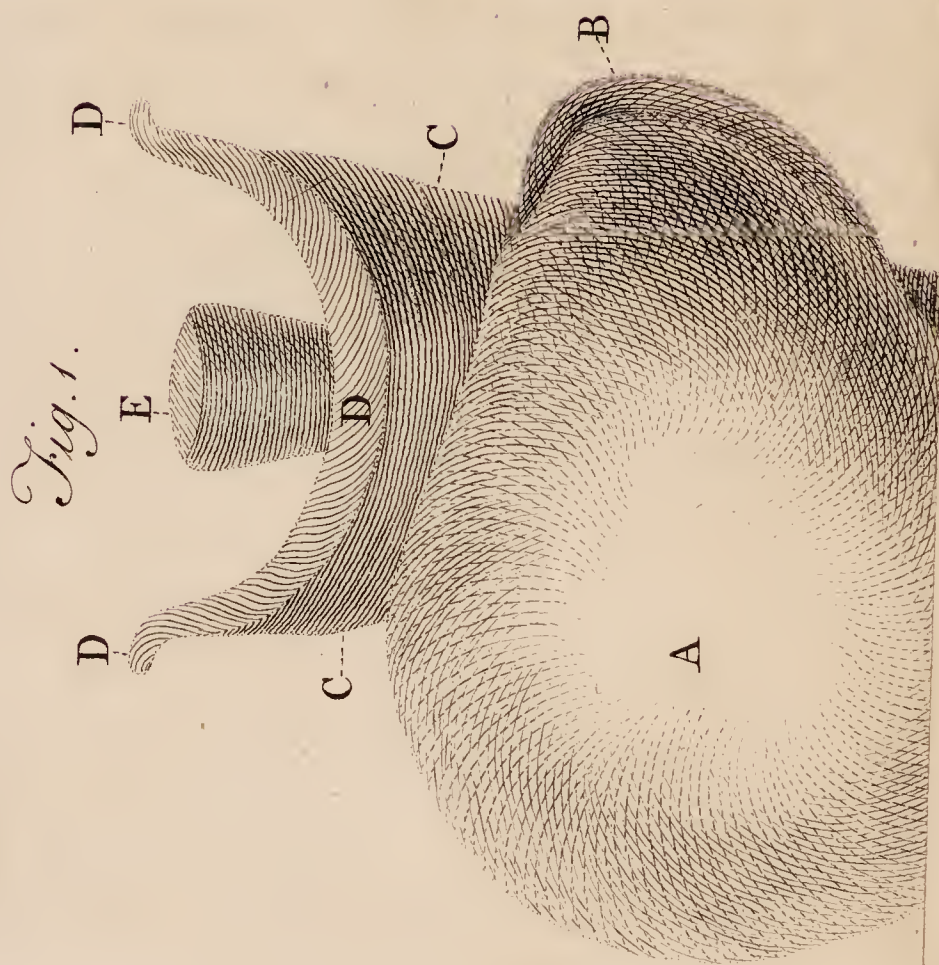


PLATE 6. *Fig. I.*

- A. The Tumor formed from the right side of the *Thyroid* Gland attached to the *Trachea*, &c.
- B. Part of the *Thyroid* Gland shewn on the left side.
- C. C. The *Thyroid* Cartilage.
- D. D. D. The *Os Hyoides*.
- E. The *Epiglottis*.
- F. The *Trachea*.

FIG. II.

- A. A. A. A. A. The appearance of the Tumor before the second puncture. These marks II denote the punctures through which the seton was drawn.
- B. B. B. The *Os Hyoides*.
- C. The *Epiglottis*.
- D. The *Trachea*.
- E. The incision made into the Tumor after the death of the Patient.
- F. The eroded hole opening above the first ring into the *Trachea*, discovered by making this incision.

Of some disorders in the *Œsophagus*.

M. A. a woman of a weak constitution near forty years of age, had long been afflicted with a great difficulty in swallowing her food ; and at length, for some years before she died, was under the necessity of using a whale bone, with a small button at the end, to propel it beyond the obstructed part. I cou'd feel with my finger in this canal, the top of the tumor, which was the impediment to deglutition.

ABOUT a week before her death, an inflammatory disorder increased the old complaint, and notwithstanding all possible means to relieve her, the *Œsophagus* was soon so contracted, that she cou'd neither swallow liquids, nor bear to have any solid food forced down, in the usual manner, on account of the extreme tenderness of the parts ; consequently was starved to death.

IN dissecting and examining the parts, I found the membrane that lines the *Œsophagus*, which had been in an inflammatory state, uniformly much thickened, be-
tween

tween two and three inches in length, beginning to grow into that condition, just where the *pharynx* contracts to form that canal ; in the middle of which space, the tumor, about the size of a very large nutmeg, was situated, that I felt with my finger in her life time. When the *Œsophagus* was stimulated to contract by any means in the act of deglutition, the sides of it were brought into contact with the tumor, totally excluding the passage even of any kind of liquid.

I have seen five other women, of different ages and constitutions who had swellings in these parts, within reach of the finger ; all of whom, sooner or later, ended their lives in this miserable manner ; but I never had an opportunity of examining the parts after death, only in this case.—It is not at all improbable, that the same dreadful consequences may proceed from an extraordinary thickening of the internal membrane of the *Œsophagus*, without any distinct tumor in the passage.—I was lately desired, with a Physician and two other Surgeons to attend the opening of this part, on account of

Two of them were of scrophulous habits.

of a difficulty of swallowing, which killed the patient, some time after she had been cured of a common inflammatory *angina*.—In this case we cou'd not discover, by the most accurate inspection, any evident cause of this fatal obstruction. We then went to speculation, which indeed affords but a faint light in discovering the cause of diseases, and supposed the parts must have been in so irritable a state, as to be thrown into spasmodic contractions, whenever she attempted to swallow any kind of food.—I have also seen two men and one woman, advanced in years, who lived, and died, in a still more deplorable condition, by a disorder in this canal. I had an opportunity of opening one of them, where I found a cancerous excrescence and ulceration, near the entrance of the *Œsophagus* into the stomach ; and from the similarity of symptoms, as shooting pains, sickness, offensive taste in the mouth, besides the obstruction to the passage of the food into the stomach, I had good reason to think the other two were of the same nature. At last their agonies were beyond expression, when the aliment came at the obstructed part, most
of

of which was then thrown up. And lately a poor man applied to me, in great distress, who I apprehend, from his complaints, has some such disorder about the middle of the *Œsophagus*.

A great number of large strumous glands situated in the *Axilla*, and underneath the pectoral muscle, successfully extirpated; and an *Ophthalmia* of that nature cured in the same patient.

November the 8th, 1750.

THE wife of *H. L. of T.* twenty five years of age, first perceived a small, indolent moveable tumor in the right *Axilla*, between five and six years ago, which grew gradually in two years to the size of a turkey's egg; another appeared then immediately beneath the clavicle, and in six months acquired the bigness of a large walnut. These tumours increased by little and little, and more glands became obstructed and swelled. About five months after, inflammations seized both her eyes, soon depriving her totally of the sight of one of them, and with the other she was scarce able to guide herself.

HER

HER parents were healthy, and before the appearance of the tumor in the *Axilla*, she had a good state of health, but after that, was grievously afflicted with pain in her stomach and heat in her bowels, accompanied with an obstinate costiveness ; for which she found but little relief, from a great variety of medicines, prescribed by a very judicious practitioner.

IN this most deplorable condition she fell under my care, with the *Axilla* full of distempered glands, beginning to have a cancerous appearance : and a chain of them was continued from thence, extending to the pectoral muscle and neck, and daily increasing.

AFTER deliberately considering the case, I thought nothing cou'd be done to any purpose, unless the diseased glands cou'd be entirely extirpated ; and a consultation was consequently held as soon as possible, consisting of a Physician and four Surgeons of eminence, who readily concurred in my opinion ; but all of us were apprehensive, that shou'd these glands be removed, even then, it was very doubtful

H

what

what wou'd be the event of the operation ; for, if the disease happened to be stopped here, the same cause still existing, probably wou'd produce the same effect, in some other part internal or external, and frustrate our endeavours.

THESE indeed were very discouraging circumstances ; but the patient, after having heard what passed in our consultation, as we thought it right she shou'd be informed of the danger, in order to chuse for herself, said, with great courage and resolution, she wou'd submit to the operation, desiring to have it done whenever it shou'd be thought proper.

A WEEK after, she being duly prepared for the operation, I performed it, in the presence of those gentlemen, beginning in the *Axilla*, whence I dissected all the glands, opening but one blood-vessel of any consequence, which I easily commanded with the needle and ligature, though it laid deep in the *Axilla* ; I then filled the wound with soft, dry lint, and engaged one of my assistants to support a compress upon it with his hand. Having proceeded thus far, we
found

found it expedient to refresh our patient's spirits with a little wine, and allow her a short respite ; after which, she readily consenting to my going on, I made an incision from the superior part of the other glands, in a curved line, to the angle of the *Axilla*, where I left off, intending to meet it at the same point with another, in order to remove an oval piece of the teguments, together with the affected glands ; but instead of laying them bare, as we expected, only the *Pectoral* muscle came in view, which circumstance made us hesitate a moment : however, having proceeded thus far, it was unanimously agreed to go on ; and upon this determination, I divided the muscle, which appeared much thinner than ordinary, in an oblique direction, as far as was thought necessary ; and the glands, being pretty much disengaged from the subjacent parts, were removed without any difficulty, or effusion of blood worth regarding. Thus ended very happily one of the most tedious and dangerous operations any of us had ever seen. There are few difficulties that occur in operations, but what we may be

able to surmount, if we can preserve a calmness and presence of mind to direct our judgment and hand.

THE number of glands taken out of the *Axilla* was nineteen, of various sizes; some were like large potatoes, others no bigger than filberts; and eight were situated under the pectoral muscle, which differed also in their size.

AFTER dressing the wound with dry lint and digestive, in the common manner, I applied soft compresses of cloth spread thick with *Unguent e Floribus Sambuci*, and the roller no straiter than just to confine the dressings. After every considerable operation, we shou'd give our utmost attention to the application of the compresses and bandage, that they may fit, and be left as easy as possible upon the tender parts, as long continued pain may have destructive consequences. From this consideration, a little warm *Ol. Olivar. optim.* shou'd now and then be poured in, after gently raising the compresses and bandage in convenient

places,

places, that tension and inflammation may be prevented as much as we can.

THE symptoms in consequence of the operation were very favourable, the wound digested kindly, and was perfectly cicatrized in eight weeks. When she was in a condition to bear alteratives, I had recourse to them, particularly to small doses of *Merc. dulcis*. Within about three months, she recovered the perfect sight of one eye, and the inflammation did not continue upon the other; but the *Cornea* was too much thickened, to transmit the visual rays. When the wound was near healed, I first put a seton into her neck, and afterwards made super-scapulary fontanelles, which were kept open about two years. For a long time after the wound was perfectly cicatrized, she drank sea-water, and took an alterative medicine composed of *Æthiop. Min.* & *Antimon. crud.*

HER happy deliverance from this impending danger, and the enjoyment of good health ever since, have amply rewarded her for her uncommon fortitude,

and me for my care of her ; she being an object of charity, and supported at her own house during the cure, by the Gentleman to whom I have dedicated these papers, whose great delight is in doing good.

Another case of a similar nature to the preceding.

IN the year 1760, a gentleman's coachman upwards of thirty years of age, and of an athletic habit, without any determinate evidence of an hereditary disorder, had a greater number of diseased glands, of a larger size and worse aspect, upon his neck, than appeared in the preceding case; and they were deeply situated between the muscles, extending from his ear to his shoulder, some lying under the *mastoid* muscle and others under the *clavicle*, without the least tendency to suppuration in any of them. This tumor began upon the *parotid* gland, and, in the space of between two and three years, increased to an enormous size; and even at first wou'd not yield, in the least, to proper methods, under the direction of a judicious Surgeon. Upon this occasion, his health in general was soon much impaired; and he had been, for a considerable time, constantly affected with feverish complaints more or less. He grew
daily

daily worse in all respects, and his life was now apparently in the most imminent danger : from these prevalent considerations, in consequence of a consultation, consisting of two Physicians and three Surgeons, I was induced to undertake the extirpation of these glands, by incision, though with great reluctance ; foreseeing the difficulty and danger of the operation, from their deep situation, between the muscles, near such large vessels as lie there, and under the *clavicle*.

AFTER having paid all due attention to the patient's bad state of health, and put him into as good a condition, with the advice of the Physicians, as the nature of the case wou'd allow, in order to make the operation succeed the better, it was performed in the presence of all those gentlemen, who had been in consultation, they having without hesitation unanimously agreed with me, that no other means carried the least possibility of answering any good purpose : indeed there seemed to us no alternative, but to give him a chance by this precarious operation, or suffer him to die a miserable, lingering death inevitably.

As

As it was necessary, to give success to the operation, that all the distempered glands shou'd be removed, there was not less trouble and perplexity in the performance of it, than was feared. It demanded a very cautious procedure to separate the glands, partly by the fingers and thumb, then cutting by their direction, with the assistance of my brethren, in order to avoid wounding the large subjacent vessels, particularly the *carotid* and *subclavian* arteries, to which some of these glandular bodies laid almost contiguous ; and indeed many of them were so intimately entangled with considerable branches, that though, by our great care in this point of the utmost consequence, we did not injure the trunks, yet the effusion of blood was much greater than in the former case, as well as the operation more tedious. The cure of the wound also proved more difficult, which was retarded by the excess of fever, accompanied with miliary eruptions to a great degree, and of long duration : however, in five or six months he was able to exercise his former employment ; but about a year after, he was taken ill with an epidemic fever of a dangerous kind, which,

which, in all probability, was aggravated by his own indiscretion, in taking a long journey in a cold day, soon after he was seized with it ; and then, notwithstanding all possible care, it quickly carried him off, as I was informed by the person who attended him in that illness.

Of a tumor upon the neck, in consequence of which, in length of time, the *Œsophagus* was eroded.

IN the year 1763, a Surgeon at some distance from *Norwich*, then the place of my residence, desired me to visit a patient with him about sixty years of age, lately fallen under his care in a very deplorable state, with a tumor of a depressed oval figure, situated between the *mastoid* and *coracobyoïd* muscles. It had been visible more than a year, gradually growing to the size of a hen's egg, and probably had begun upon, or very near the *Œsophagus*.——The tumor, and all that side of his neck, extending to his head, was attended with violent pain; he had long found great difficulty in deglutition, cou'd now swallow no solid food, and was sensible of a small quantity of very offensive matter, frequently coming into his mouth, from his throat.

UPON a strict examination of the tumor, I was very sensible of a fluctuation of some fluid in it; and after well weighing and considering every circumstance, I strongly suspected

suspected there was a communication between it and the *Œsophagus*. I proposed the opening of it to my Brother, who was a young man, unexperienced and timid; he discovered fears on that account, and desired me to open it; I readily complied with his request, not having the least doubt upon my mind, as to the propriety of such a step: I made a moderate opening, at which was discharged a tea-cup of ichorous matter exceedingly fetid; and upon introducing a probe, it passed into the *Œsophagus*, without any interruption, fully confirming our opinion.

THE matter was of such a corrosive nature, that it immediately turned the probe of a copper color. The dressings afterwards were superficial, in the common manner, after injecting a little warm *Jamaritan balsam* with an ivory syringe. By opening the tumor, and this gentle treatment, the patient's pains were greatly mitigated, he swallowed soft food with ease, and his life was rendered, though not comfortable, much more tolerable; but his constitution was so much impaired, that notwithstanding all possible care, as drinking ass's milk, &c. he languished and died tabid about a year after. A

A POOR man about the same age, and in a declining state also, lately asked my advice, in a case similar to this, which I represented, at his request, to the Surgeon he intended to employ ; giving an account of the preceding, in order to engage his attention the more ; but leaving *Norwich* soon after, I did not hear the event.

A cancerous breast of an enormous size extirpated, and the wound healed.

September the 11th, 1755.

IN a consultation held on the case of Mrs. D. of P. a woman remarkably corpulent, yet very active and temperate, it was unanimously agreed, that she had no other chance for relief than by losing her breast ; which was about a yard in circumference, not yet fixed, but threatened immediate ulceration.

UNDER these discouraging circumstances, we cou'd not urge the operation ; but the week following, at her own desire, I performed it, Mr. *Layman* of *Diss*, an eminent Surgeon, and the Surgeon whose patient she had long been, assisting me. The operation did not prove tedious, considering the magnitude of the breast, nor did any thing material occur in it.

THE

THE skin of the whole breast was affected to such a degree, that we durst not attempt to preserve so much of it as we wou'd willingly have done; and the *membrana adiposa* was near five inches thick towards the *Axilla*.

WE examined the principal distempered gland, suspended in a bloody fluid, which also appeared of a lymphatic nature, by inspissating with a moderate degree of heat. The cyst which contained the fluid, was formed of the *capsula* of the gland, the gland itself remaining in a *scirrhus* state; out of which an excrescence was grown, resembling the head of a colly-flower, as represented in Pl. 7. Upon cutting into the body of the gland, which was like the gizzard of a turkey, we observed some vessels varicous, others ruptured, and many coagula of blood, such, we suppose, as the Ancients called *Atra Bilis*, and looked upon to be the efficient cause of Cancers.

THE wound healed very kindly, without any bad accident supervening, and was perfectly cicatrized in little more than three months, by the great care of the Surgeon
whose

whose patient she had been before ; and she enjoyed good health for about a year after.

December the 28th, 1756, I was again desired to meet her Surgeon in ordinary, on account of an indolent tumor which extended uniformly over the whole *scapula* on the other side, and measured three feet and eight inches in circumference, without the breast, or glands in the *Axilla*, being the least affected ; yet I looked upon it as an appearance of the old leaven, and therefore advised no application, only to have it well supported, and that all possible care shou'd be taken to prevent its breaking ; plainly foreseeing, that under such a circumstance, her case wou'd be still more deplorable.

BEFORE her death, which happened on *April* the 2d, 1757, the tumor was much increased ; she lived but a short time after it broke, and that in the utmost misery, without any ease, but what was procured by opiates : the discharge was immensely great, and the matter not only excessively offensive in smell, but the effluvia proceeding from it were so virulent, as to affect those

those who constantly attended her. One of the persons who bore her to the grave told me, that the stench made him very sick, and that he was immediately after seized with a flux, which soon relieved him, and carried off this casual disorder.

THE cicatrice where the breast was extirpated, continued perfectly smooth and well, to the time of her death, without the least appearance of the disease upon the circumjacent parts.

Many years ago Mr. *Layman* of *Diss* and I were present, when Mr. *Amyas* late of *Norwich* extirpated a cancerous breast, in which we found a considerable quantity of gravel, and some small stones in the middle of the glands.

PLATE 7.

The representation of the cancerous gland.

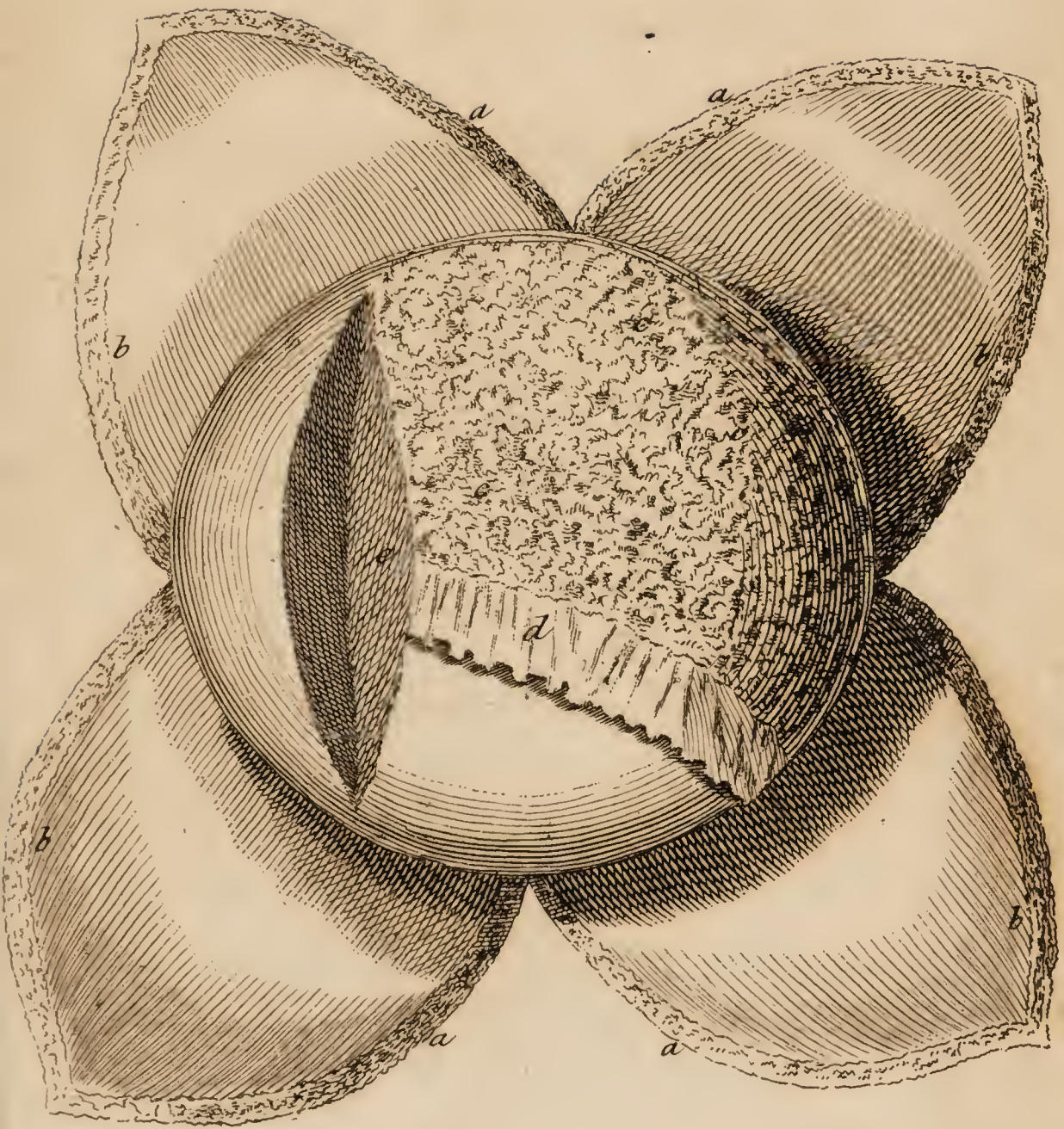
A. A. A. A. The common teguments.

B. B. B. B. The *Capsula* of the Gland which formed the cyst, containing the bloody fluid.

C. C. C. The colly-flower-like excrescence which sprouted from the body of the gland.

D. The *Fimbria* which laid loose upon the gland, but was attached to the excrescence.

E. The incision into the body of the gland, which discovered the varicous and ruptured vessels, and the coagula of blood.



A cancerous disease, which arose from drinking some liquor impregnated with the matter that issued from an ulcerated cancer.

IN the year 1752, I was desired to visit a person of great virtue and veracity in, the City of *Norwich*, near sixty years of age, who had a cancerous tumor upon her breast, with the glands in the *Axilla* much affected, causing a large *œdematous* swelling of the whole arm quite to the fingers ends, attended with great pain.

THE account she gave me of her very singular case, confirmed by her relations, was as followeth. That her parents were healthy, and that when she was a child about three years old, she went with her mother to visit a friend, who had an ulcerated cancer upon her breast, which had just been dressed; and some of the liquor, with which it had been washed, standing in a tea-cup upon the table, she drank a little of it. In consequence of this unfortunate accident, an eating ulcer seized her

tongue, and one side of her mouth, about a fortnight after ; making dismal ravage of the cheek, on the outside as well as on the inside. On this account, she was put under the care of a Surgeon of great character in *London*, who found much difficulty in stopping the progress of the disease here. More than twenty years after, the leaven shewed itself upon her thigh, where she had received a contusion by a fall, some years before ; and an abscess was now formed near the bone towards the articulation of the hip, which was also cured with the utmost difficulty, by a very able Surgeon at *Norwich*. She enjoyed a tolerable good state of health after this, for about fifteen years, and then discovered a small scirrhus knot in her breast, indolent and moveable, increasing but slowly till the time of the cessation of the menstrual discharge, when it began to increase very considerably : in a few years it possessed the whole breast, and at last the glands in the *Axilla* likewise. The tumor remained in an occult state as long as she lived ; but some months before her death, her arm became affected as has been described.

Monst

Monf. *Dionis* fays, that out of twenty women who had cancers in their breasts, he observed fifteen of them were seized with the disease at between 45 and 50 years of age, the time when nature generally suffers a considerable change from a cessation or diminution of the menstrual evacuation : and he also fays that he saw many women in the monasteries afflicted with cancers, who were about that age, in a tour he made through the provinces in *France*.

A case in which an immense quantity of bloody lymph was contained in the breast of a woman about 40 years of age ; and all the glands in a very putrid state.

TWO years ago I was in consultation with a Physician and a Surgeon in this case, which much resembled those collections of bloody lymph mentioned by the celebrated Professor *Monro* in vol. 5 of the *Med. Essays*, and in which we had no success. It was a dreadful case indeed, and the patient lived several days in the utmost distress, with an invincible locked-jaw. This convulsion, thus denominated by the moderns, did not pass unobserved by the immortal *Hippocrates*, as appears in the seventh book of his *Epidemics* ; but he knew no cure for it : that important discovery was reserved for the present age ; and we have some instances of cures having been performed, in the *London Med. Observations and Inquiries*, by the liberal use of that divine remedy, *Opium*, as I have before mentioned.

REFLECTIONS

REFLECTIONS and REMARKS relative
to the extirpation of cancerous
breasts, &c. by incision,

FROM the success I have observed to attend this operation, in patients of others as well as my own, in a sufficient number of instances, I think too much discouragement has been given to it. In order to have it succeed the better, the utmost attention shou'd be paid to the eradication of every diseased glandular substance that can possibly be discovered, be it ever so small, and not leave any in the *Axilla*: And when the operation shall be thought advisable, after being deliberately considered in consultation, even where there is some adhesion of the tumor to the *pectoral* muscle, it is certainly right to dissect off a considerable portion of that along with it; and I have seen good consequences from such practice.

A NOBLE Lady of transcendent virtues
and unexampled fortitude, for whom I had
the

the honour of performing this operation more than six years ago, has enjoyed a perfect good state of health ever since, which her Ladyship has, from time to time, given me the great pleasure and satisfaction of knowing, in a manner that adds to her dignity and my obligations.——In her case, the glands in *Axilla*, and the whole breast, had long been much affected: yet the wound not only healed speedily and kindly, but the cicatrice never broke in the least degree after it was first closed; nor has there been any kind of appearance of the disease upon that or any other part since, though various reports to the contrary, and even very lately, have been spread by busy people too ready at invention.

ABOUT three years ago I was called into consultation with a Physician and a Surgeon, for a Gentlewoman upwards of forty years of age, concerning a cancerous disorder of many years standing, which extended over great part of the *deltoid* muscle. It was now grown much worse, and evidently affected her health in general; probably owing to absorption of putrid matter.

THOUGH

THOUGH this tumor, which had always been flat, and had long been ulcerated, had a true *carcinomatous* appearance, and was strongly attached to the subjacent muscle, yet, considering all circumstances, and that no method had procured relief of any consequence, we unanimously proposed the extirpation of it; taking in an inch of the sound skin, and a considerable thickness of the muscular substance itself, in dissecting it off. The operation succeeded happily; the cicatrice stands perfectly well, she can elevate her arm, and use it in all directions, without any impediment; enjoying a much better state of health than she had done for many years.——During the cure of the wound by the common treatment, alterative remedies of the usual kind were prescribed, and an exact regimen of diet observed; and when it was nearly healed, superscapulary fontanels were advised; more particularly on account of some great complaints she had been subject to a long while, both in her stomach and bowels.

See dissertations upon cancers, in the Mem. de l'Acad. Roy. de Chirurg. Tom. 1 and 3: And in the prize Mem. of that Society upon the same subject.

There has been a medicine of a caustic nature, some years in great vogue in this Kingdom for the extirpation of cancers, the basis of which is supposed to be *Arsenic*, qualified to render it more gentle in its operation; but notwithstanding that qualification, it is well known to act with a greater or lesser degree of pain as other caustics do, according to the local, or constitutional sensibility of the patient.—All things deliberately considered, it appears highly probable, the preference will still be given to the judicious use of the knife in extirpating cancers. This matter Mr. *Gataker* has set in a proper light, in his introduction to his Essays on medical subjects.—Also see what Mr. *Beckett*, who was Surgeon to St. *Thomas's* Hospital, says upon this subject in his chirurgical tracts, concerning the use of applications to cancers which have *Arsenic* in their composition. He concludes by discouraging their use, after having well attended to their effects.

An abscess in the *Pleura* opened
and cured.

MR. R. N. of M. about forty-five years of age, who had, by great intemperance, injured a good constitution, was seized with a pleurisy in the beginning of *September* 1755 ; on which account he was blooded, and treated as regularly, as an untractable patient wou'd permit ; but all to little purpose. Respiration became extremely difficult, attended with a violent cough and continual fever. He grew daily worse in all respects, and his life appeared to be in the most imminent danger ; yet, not being truly sensible of his condition, when urged by his friends to do what was proper, he rejected their persuasions, and shewed an invincible obstinacy ; but at length his breathing becoming so difficult as to threaten immediate suffocation, I was called to him in great haste, *October* the 25th.

BESIDES these symptoms, I found him greatly emaciated. After strict inquiry, and obtaining

obtaining all the information I cou'd from himself, and those who attended him, I carefully examined the affected side, and, comparing it with the other, it appeared rather thicker, especially where he complained of a fixed pain, which was between the fifth and sixth rib, about the middle of the space from the *sternum* to the *spine*; upon which part I understood he had formerly received a blow, though he had no complaint in consequence of that accident, worth taking notice of, till he was attacked with this pleuretic disease.

AFTER having considered all these circumstances, I was inclined to think an abscess was formed in the *pleura*, and that the matter wou'd soon make its way into the cavity of the *thorax*, if it had not already done so; which consideration determined me to propose the operation directed in the *Empyema*, without delay, as the only means of relieving him. He was very much averse to this; but by reasoning with him, and shewing the improbability of affording him relief in any other manner, joined to the earnest intreaty of his relations and

and friends, he did at last comply with what I proposed.

THE operation was then forthwith performed, directly upon the part where he complained of pain, and a large quantity of fetid matter was evacuated. The next day, in order to keep the aperture open, for a free discharge of the matter, in the intervals of dressing, I introduced a flat hollow tent, dipped into *Belloste's* compound *Samaritan Balsam*; applying over it a piece of common plaster, having a hole in the middle corresponding to the mouth of the tent, with a soft compress, a laced flannel bandage and scapulary. The tent was made of a leaden canula, covered with a piece of plaster, with ears of a sufficient length and breadth to rest steadily upon the rib above and below, confined to the part with strips of plaster. This method of dressing I have often found answer the purpose perfectly well in such cases.

UPON the evacuation of the matter, he was immediately relieved, the pain and cough ceased, he breathed freely in every position of his body, in a short time the fever

fever left him, and he recovered a good appetite. The discharge was very large for about ten days, then became moderate: when the matter was grown well conditioned, and the quantity of it much lessened, I left out the tent, and carefully touched the circumference of the wound with *Lap. infernalis*, dressing for the future superficially; and in about six weeks it was perfectly healed. During the cure, ass's milk, balsamics, &c. as usual in such cases, were prescribed, and he soon recovered as good a state of health, as in the former part of his life.

When we have reason to suspect that an abscess may be forming in the *pleura*, we cannot be too watchful, as it is of the utmost consequence to discover and open it before it bursts and discharges the matter into the cavity of the *Thorax*. What Mr. *Sharp* in his *Critical Inquiry*, and Mons. *Le Dran* in his *Operations and Observations in Surgery*, have written upon this subject, with the different kinds of *Empyema* and *Abscesses* in the *Thorax*, deserve to be read with the greatest attention. *Bonetus* in his *Anatomia practica* has also a collection of cases to the same purpose, well worth reading.

A history of a case, and what appeared upon opening the body of a robust man aged 45.

Feb. 24th, 1761.

EIGHT years before his death, he was kicked by a horse, upon the lower part of the *Thorax*, towards the right side. He immediately discharged much blood at the mouth, complained of violent pain, and his life was thought to be in imminent danger: however, by proper treatment, he was relieved, but was never after free from complaint, at times, upon the injured parts; and, for the last three or four years, of his life, every three weeks or month, or oftner, he used to throw up, or pump up as he expressed himself, a considerable quantity of purulent matter, which was thought, though with no good reason, to proceed from his stomach; and then grow so easy and well as to follow his ordinary employment again. About three weeks before he died, he was seized with a violent pain of
his

his side, attended with great difficulty in respiration, which was considered, and treated as a common pleuretic disorder, but without any relief; nor did he cast up any purulent matter, in the usual manner, as I was informed, for I never saw him whilst living; but received this account from a very intelligent person, who was perfectly well acquainted with every circumstance of his disease, from the beginning.

I WAS desired, with two other Surgeons, to open the body, in the presence of the Physician, who had attended the patient in his dying illness. Upon dissection, and a very accurate examination of the *thorax* and *abdomen*, both which cavities were brought in view at the same time, we found all their viscera sound, except the lungs, on the side where the original hurt was received, the investing membrane of which had a very strong adhesion to the *pleura*: and in the right lobe of that organ, there was a great collection of purulent matter; the depending part of which cavity, where the matter was contained, was between the sixth and seventh ribs, counting from above.

above. This was a very favourable place for the operation of the *Empyema*; and that might have prolonged the patient's life, if it had not cured him : but the true nature of the disease had not been discovered, consequently that was omitted. The matter was forcing its own way externally, and had penetrated the internal intercostal muscle between those ribs, and made them carious. This large cavity containing the matter, extended into the right lobe of the lungs, about half its breadth and length obliquely upwards ; whence the matter, by *sinuses* formed in the air-vessels, was carried into the *Bronchia*, then to the *Trachea*, and so evacuated by the mouth, when the cavity was full : and when he was about pumping it up, as he called it, he used to throw himself upon the opposite side, or put his head between his knees ; in which postures it wou'd sometimes run out spontaneously, without any force, more than the natural action of the lungs and diaphragm, to expel it.——It is also farther remarkable in this case, that

the patient was fat and full of flesh, without ever having had any symptoms of a wasting hectic, from the matter lying continually in the lungs for so many years.

Another case, in which the nature of it was not fully discovered, till the body was opened after death.

IN *January* 1765, I was desired, with a Physician and two Surgeons, to visit a poor girl about twenty years of age, who had a tumor, of many months duration, upon her loins ; at which part two of the *vertebræ* projected considerably. The summer preceding, she had pulmonic complaints ; whence it was apprehended, that the matter, evident in this tumor, might be originally formed in the lungs, or some other part in the thoracic cavity, and have gradually descended, though we cou'd not be well informed, whether there had been any signs of an *Empyema* immediately in consequence of the pulmonic disorder : but what strengthened the conjecture, was my having observed three or four cases, in which the matter was originally collected

in the cavity of the *Thorax*, and shewed itself in the lumbar region.

SOME time after opening the tumor, which contained a very ill-conditioned, acrimonious matter, she also expectorated a putrid *sanies*, which circumstance confirmed our opinion. In this miserable condition she lingered many months; and what still added to her distress, about two months before she died, her lower extremities became paralytic, from the *spinal* marrow being affected.

UPON opening the body, we found more than a common adhesion of the lungs to the *pleura*; they were in a manner grown into one substance, not to be separated without tearing the parts. Here the source of the disease appeared, communicating with the tumor that was opened upon the loins. All the intermediate *vertebræ*, from the fourth of the back to the third of the loins, were more or less carious; and the ribs at their junction with the *vertebræ*, and under the adhesion of the lungs and *pleura*, were affected in the like manner.

An incysted tumor situated between the muscles of the *Abdomen* and the *Peritonæum*.

MR. C. M. a man of more than ordinary bodily vigour and muscular strength, aged about thirty-five, received some blows upon the *Abdomen* in a boxing match, which were not attended with any worse consequences than slight transient pains, for the space of four or five years; after which period, a circumscribed tumor appeared three or four inches round the navel, accompanied with a constant obtuse pain. In this state it remained several years, making but a slow progress; and the *Diagnostics* were so obscure, that those whose advice he took, were very dubious concerning the nature of his disease.

ABOUT ten years were elapsed since the accident, when he came to ask my opinion, *October* the 12th, 1741. After considering the detail he gave me of his case from the beginning, and strictly examining the tu-

mor, which was increased in the last six months to a great size, extending most towards the *inguen*, I was inclined to think it of the lymphatic and incysted kind. His health had long been greatly impaired, the tumor was prominent and much inflamed at the navel, the matter seemed to have made its way through the cyst, and just ready to break through the skin.

I ATTENDED him as soon as he returned home, and upon attempting to rise from his seat when I entered the room, the skin broke, and a large quantity of a brown, lymphatic fluid, flowed out at the navel. As the matter had made its own way, he wou'd not suffer me to make an opening at the bottom of the tumor, either by incision or caustic, as I proposed and urged; nor yet to remove the thin teguments at the navel by knife or scissars, in order to procure a more free and uninterrupted exit to the matter; but through much persuasion he did allow me to touch them with a piece of the pipe-form *Lap. infernalis*. Next day the aperture was plugged up with a stiff gelatinous substance, which I extracted
with

with my forceps, and then, after pushing back the cyst, at least three pints of the same kind of fluid gushed out. The dressing was after the usual manner, and when the *eschar* fell off, I touched the parts again with the caustic, as much as an ungovernable patient wou'd allow ; aiming to open, by this means, an ample passage for the cyst. Thus I proceeded, and on *November* the 3d, when I removed the dressings, I found the cyst, resembling an inflated intestine, strangled in the opening, still too narrow to admit of an easy extraction ; but with great care and trouble, I did extract it whole. It was in substance about the thickness of the large intestines, very putrid, and had a cadaverous smell excessively offensive. A few days after, I extracted another entire cyst of a smaller size.

THERE was now an immoderate discharge of a fetid matter, highly acrimonious, which excoriated the skin, and turned silver in a minute's time like copper, as if put into a corrosive spirit. He had a cough, was hectic, and daily lost flesh and strength ; yet, as the cysts were come away,
this

this untractable, inconsiderate patient, thought he shou'd soon be cured, and all the arguments I cou'd use were not prevalent enough to convince him, that much still depended upon making an opening at the bottom of the *sinus*, which was very capacious. Under these circumstances I was greatly embarrassed, and dreading the worst consequences wou'd attend the constant absorption of putrid matter into the blood, I insisted upon a consultation, in hopes the result of it wou'd influence him to submit to what appeared to me absolutely necessary to be speedily done.

A VERY eminent Physician and Surgeon in the City of *Norwich* were accordingly consulted, and after examining the part, and considering the condition the patient was in, they both peremptorily told him, he must submit to a depending opening being made, as I had proposed, if he wou'd give himself a chance for his life. The thickness of the parts, I believe, was about two inches, through which an opening was agreed upon to be made by a caustic. I foresaw the difficulty that wou'd attend effecting

fecting it, by the common manner of applying the caustic ; therefore, after moistening the skin with a few drops of warm water, I began with rubbing it gently with a piece of pipe-form *Lapis infernalis* ; and having thus mortified the skin and *membrana adiposa*, I divided the *Eschar* immediately with a lancet, laying the muscle in view, and thrusting the point of the lancet a little way into it ; I then took a pointed piece of the caustic-stone, and by turning and pushing it with a moderate force, wrought into the bottom of the *sinus*, as the probe directed, in less than half an hour : through this opening I drew a seton, dipped in *Belloste's* compound *Samaritan Balsam*, and soon gained a free discharge of the matter at this depending place, immediately above the ring of the muscle on the right side.

WITHIN a week or ten days there was a visible amendment in the patient's health, and the matter grew better conditioned. Soon after the *Eschar* was digested off, I discontinued the seton, introducing

cing a leaden canula in its stead, through which the matter passed uninterrupted, and ordered a flannel body piece to be laced on, with an easy compress stitched to it, to rest upon the superior part of the *sinus*. When the matter appeared well conditioned, and in a small quantity, I left out the canula and dressed superficially, only with dry lint and a common plaster. By this treatment, with a few internals and drinking ass's milk, he was perfectly cured in about four months. He lived many years after, and often told me he enjoyed as good health as in the former part of his life, without finding any considerable diminution of his strength. He died at last in consequence of a mad frolick, by a fall from his horse.

From what I have observed myself, in a variety of instances, I have reason to believe, the application of the *Lapis infernalis* in the manner I have described, will be found most eligible, as it acts much quicker, and the *Eschar* can be made of the very dimensions we chuse. The caustic and opposite caustic, as it is called and recommended by Doctor Barry, in the 4th vol. of the *Edinburgh Med. Essays*, act very powerfully; which method was practised by *Wiseman*, in
destroying

destroying strumous glands, and upon his authority I followed it, on various occasions, long before Doctor *Barry's* recommendation of it.—See notes at the end of the chapter concerning applications necessary in the cure of wounds, in my treatise upon that subject.

Of a *Prolapsus Ani*, &c.

IN the year 1749, I was consulted in this case by a Gentleman's wife, wherein the parts suspending the *Anus*, had been so relaxed for a long time, that she was not able to walk across the room without its prolapsing. On this occasion I thought of the steel machine represented in Pl. 8. which immediately answered the purpose so well, as to enable her to follow her family affairs with ease and comfort ; it was not long before she cou'd walk some miles, and ride on horseback with it, without any considerable inconvenience.

SHE had been grievously afflicted with the bleeding piles almost all her life ; at length, from one of them, that was increased to a large size, such an *hæmorrhage* ensued, as brought her life into most imminent danger. Upon this account I was consulted again in 1751, and was of opinion with her Physician and Surgeon in ordinary, that nothing cou'd be done with a prospect of relief without taking it off; consequently
the

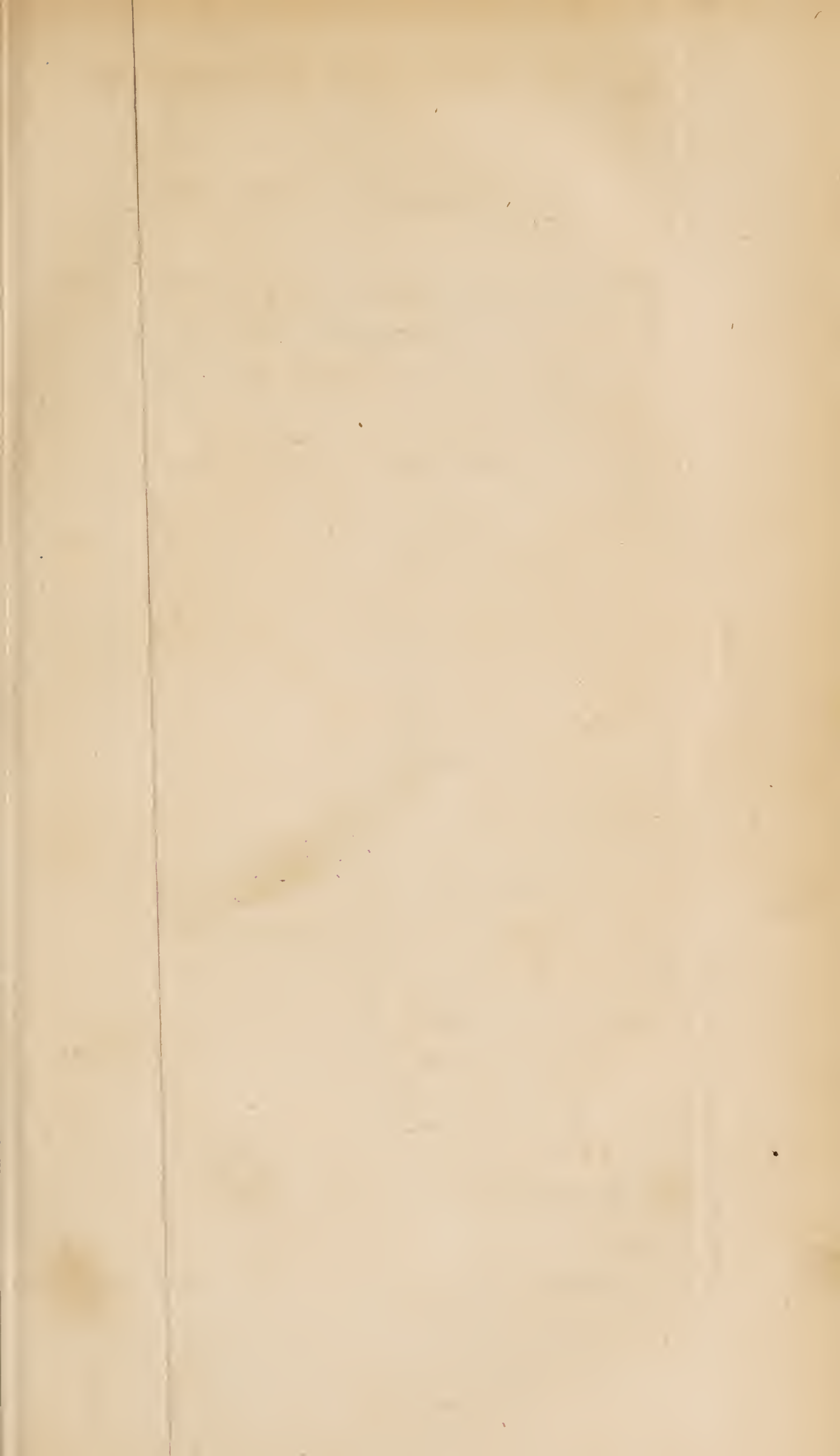
the operation was forthwith performed by excision, after passing a ligature about its basis, as in extirpating a tonsil, which, in all probability, saved her life, as her solids were greatly relaxed, and her blood exceedingly impoverished, by the long continuance of the bleeding, that had frustrated all other means which had been used.

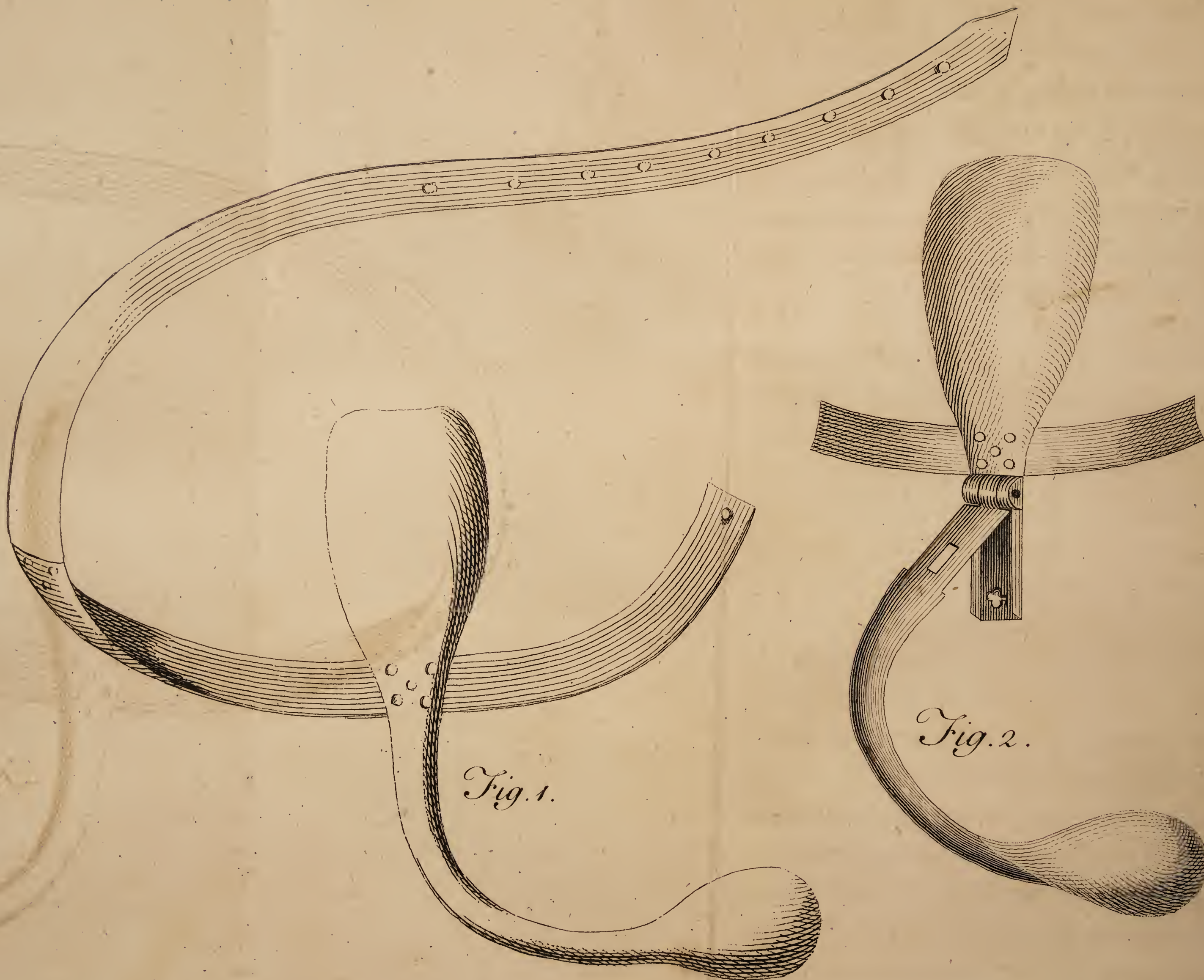
SHE was of a costive habit, and whatever medicines were prescribed to remedy that inconvenience soon lost their effect. Seawater was at last tried, which agreed with her; it answered the intention perfectly well, and does so to this day, in the same small quantity as at first using it, though she has drank it almost fifteen years.

As soon as she cou'd bear the machine or truss after the operation, she wore it again, and now cannot go at all without it. Were it not for this assistance, in her own opinion, her life must have been extremely miserable, cou'd it have been preserved: and I have received accounts of several persons having found great relief by a truss of this kind, as well as the like advantages in patients of my own.

SHE

SHE wears the bow upon the upper part of her hips, the flat upright part under her stays up the *spine*, and fixes the band at the bottom of the *abdomen*. In this manner she finds that it keeps well fixed upon the part; and that upon any occasion, now she is used to the management of it, she can easily slip it aside, and adjust it again. The dimensions for her, who is of a common size, are 15 inches long, properly turned, and made rounding where it passes between the hips; the flat part of it, made a little tapering, is about two inches broad at the top; the pad is of an oval form, near an inch broad, well stuffed and prominent in the middle; the bow is 18 inches long and one broad, thin and very elastic, and so curved as to fit easy upon the parts; the band is 20 inches long; the whole of the machine is covered with soft oiled leather, and stuffed where necessary for the patient's ease. Great care is required in taking the measure, to have it well fitted to the parts, with an easy and regular bearing every where; and it shou'd be made of such well tempered stuff, as the workmen term it, as will admit of bending and altering to adapt it properly. The best way of
measuring





measuring for this, as well as for common trusses, is with a wire, which can be turned every way, and will stand to the form or make of the parts.

Additions or alterations may be made in this machine occasionally, at the discretion of the Surgeon; perhaps another bow to pass over the loins, a suspensory from the shoulders, or a strap between the thighs, coming from the waist-band, and hanging unto a hook on the outside of the pad, &c. may be found necessary to fix it steadily and well in some cases.— In order to have an opportunity of turning it back out of the way upon any occasion, a joint may be made just below the bow, letting the ends lap a little one over the other, to be fixed at a proper distance from the joint, by turning a small button, after passing through a slit, in such a manner as any ingenious workman will easily conceive, from what is represented in the Plate annexed.

Of the dreadful consequences of indurated excrements accumulated in the *Rectum*.

A FEW years since I was desired, with a Physician of the highest character, * to attend a patient who had long been in other hands, and the case treated as an obstinate *Diarrhœa*; and now a total suppression of urine had attended the other disorder many days. The great discernment of this excellent Practitioner made him strongly suspect what was really the cause of both complaints: on which account I was sent for, and upon examining the *Rectum* with my finger, I found it crowded with hardened excrements, in large distinct lumps, by the side of which some

thin

* Doctor Offley of Norwich, a Gentleman of the most respectable character out of his profession as well as in it.

thin *Fæces* frequently escaped, and deceived those who had before been concerned, who did not think of examining the *Rectum*. The bladder was so distended with urine, that we cou'd plainly observe its figure rising up near to the navel, and easily feel the fluctuation of the fluid in it. As the suppression of urine was become the most distressful circumstance, and attended with extreme pain, I proposed attempting to pass a *catheter* directly, and succeeded with very little difficulty, notwithstanding the resistance and pressure of the excrements at the neck of the bladder, and drew off several pints of urine. After giving the patient this relief, I made room in the *Rectum* to inject, with a large ivory syringe, warm *Ol. Olivæ*. as far up as possible, which operation was frequently performed, and in the space of twelve hours brought away an immense quantity of indurated lumps of excrements, some of a vast size, to his inexpressible ease and comfort, as he had for some weeks been in the utmost distress.

I HAVE been concerned in some such oppressive cases as these, where I have been
L. forced

forced to use a scoop, like that used in *lithotomy*, before any kind of injection cou'd take effect; particularly in one attending a *Hemiplegia*, for want of due attention at first. In this case I was assured the patient had not had the least *faecal* discharge for a month; and to this circumstance the persons who attended her constantly spoke in the most positive terms, when I questioned the truth of what they asserted.

HERE, the *Rectum*, which is very capacious, was distended with excrements to its utmost limits, the parts having totally lost their expulsive power; and to remove them sufficiently to admit of injections, to any purpose, proved a very tedious and laborious piece of work, which I performed principally with a marrow spoon, an instrument the best adapted for such an operation, that I cou'd procure upon this exigence.

An extraordinary case of biliary concretions passing through, in consequence of an abscess formed under the false ribs.

November the 15th, 1760.

MR. Carter, House-Steward to Sir *Armine Wodehouse*, about sixty years of age, was seized, 15 or 16 years ago, with a violent pain in his stomach, as he expressed it himself ; which returned, at times, very severely, for the space of two years, and then went off almost entirely. During all this time he was free from symptoms of the jaundice, but his complexion denoted a disease of the liver ; and probably the pain he formerly complained of, arose from the irritation of some such concretions, in their passage through the *cystic* or other *ducts*.

ABOUT two years since, he fell upon the region of the liver, across a wooden horse used in sawing billet ; for which accident he neglected to apply to a Surgeon,

having no other complaint, immediately in consequence of the fall, than a little tenderness upon the part, as might arise from a slight contusion, which went off in about a month. He remained easy till *May* 1760, when he first observed some thickness of the teguments, of a small extent, just beneath the short ribs; but attended with no pain, except a little pricking sensation on the right side when he stooped; nor was there then the least appearance of inflammation or discoloration upon the skin. The tumor gradually increased, in a few weeks, to the length of six inches, with the course of the ribs, and four in breadth, and in this state it remained till the *August* following, when the skin became thin and inflamed in the centre, the dimensions of a large pea, where it was suffered to burst of its own accord: at which opening a great quantity of ichor was discharged, but the patient cou'd not certainly say, whether it had or had not a bilious color or appearance. This spontaneous opening soon closed, so far as not to admit of the smallest probe, when he applied to a Surgeon, though, at the same time, the discharge indubitably proved there was some *sinus* of great extent.

AT the time above-mentioned, Nov. 15th, 1760, the patient came to me, with his Surgeon, at his Master's desire. We cou'd not then introduce the smallest probe, but the stilet of a *catheter* entered readily, almost in an horizontal line, in an erect posture, about two inches, where it stop-ped against some solid substance, which seemed firmly fixed. We agreed, that the opening shou'd be sufficiently enlarged when he returned home, after which the Surgeon extracted a biliary concretion, about the size of a large garden-pea, and in a few days 24 more came forward, so as to be easily extracted. They much resembled old, hard *castile-soap*, and were depressed into various irregular, angular figures, as delineated in pl. 9. They were so inflammable as to be entirely consumed in smoke and flame, upon a hot iron, except a small portion of a terrene matter; one of them, being burnt in that manner, filled the room with a strong gummous scent. (a)

(a) See Doctor Coe's excellent book upon biliary concretions.

THE aperture was kept open with a leaden canula, in order to give a free exit to the matter, and facilitate the expulsion of more concretions, that might remain in the part ; and by the *August* following he had voided 68 of these stones. At this time, upon paying a visit to Sir *Armine Wodehouse*, I found our patient in better health than he had been for many years, and much freer from an asthmatic complaint he had long been afflicted with, following his business with ease and satisfaction : but finding some little inconvenience attended keeping the passage open, he was much inclined to leave out the canula, and suffer it to close ; against which step I strongly remonstrated ; and after shewing him of what consequence it appeared, to have the opening preserved, both to give room for the expulsion of more stones, which might still remain behind, and on account of his asthmatic disorder, &c. he yielded to my advice, though with some reluctance.

WHEN I attended one of Sir *Armine Wodehouse's* sons, in *December* 1762, with Doctor *Offley*, we strictly inquired and examined

mined together into Mr. *Carter's* state and condition. We found the canula still in the fistula, and advised the continuance of it, by all means :—that he had voided no concretions since *August* 1761 :—that his health in general was much improved :—that he breathed well :—that he had, in a great measure, lost the copper-color of his face, denoting an *hepatic* disease ; and that he was grown as full of flesh, according to his own account, as in the former part of his life, before this disorder came upon him.

IN the 1st vol. of the *Mem. of the royal Academy of Surgery at Paris*, and in the first *Memoir*, concerning tumors of the gall-bladder, written by *Monf. Petit*, are three cases related, from *Leauté*, *Peyronie*, and *Saurau*, well worth reading on this occasion ; but a precedent more pertinent and similar to the case I have been relating, than I can find in any other book, is recorded by *Bonetus*, in his collection of rare cases, entitled, *Medicina septentrionalis collectitia*, vol. 1. pag. 657 ; for which reason, and because that work is in but few hands, I have transcribed the whole from it.

Calculi ex Abcessu circa Hepar.

‘ Pauci elapsi sunt anni, quod hic Uratislaviæ vixe-
 ‘ rit, Johannes Groschius, Œconomus Xenodochii
 ‘ ad Spiritum Sanctum, vir robustus ac validæ consti-
 ‘ tutionis, temperamenti sanguineo-cholericæ. Hunc
 ‘ quondam mense junio anno ætatis 60, desubitò rigor
 ‘ vehemens invasit, cui postliminio dolores in hypo-
 ‘ chondrio dextro ad regionem hepatis una cum tu-
 ‘ more nucem juglandem æquante accesserunt. Tu-
 ‘ mor is, doloribus persistentibus, intra semestri spa-
 ‘ tium adeò increvit, ut tandem panem filigineum
 ‘ Uratislaviensem quantitate tantum non superaret, sic-
 ‘ que induruit ut scirrhum referret. Quanquam ve-
 ‘ ro affectui huic cura diligentior adhibenda fuisset,
 ‘ ægrotus tamen nec Medico nec Chirurgo usus, sed
 ‘ sui ipse curam suscipere ausus est; internè quidem
 ‘ Balsamum Sulphuris, aliquandiu singulis diebus,
 ‘ deinceps bis terve in septimana, ut et nonnunquam
 ‘ pulverem cardui benedicti adhibuit, et pro evacua-
 ‘ tione quandoque, velut pro libitu, rhabbarum; ex-
 ‘ ternè vero ab initio ad finem morbi nil nisi Emplaf-
 ‘ trum Jensoni Norinbergense tumori applicuit.
 ‘ Tandem aliquando contigit, ut circa Festum Nativi-
 ‘ tatis Christi, dum noctu ægrotus dormiret, se haud
 ‘ sentiente, tumor rumperetur, unde magna quantitas
 ‘ materiæ pultis instar crassæ, cinericeæ coloris, in-
 ‘ tegræ quatuor septimanis profluxit, donec tumor
 ‘ quasi omnino desideret.

‘ Post hæc ex vulnere, quod interea in fistulam dege-
 ‘ neraverat, atque in nonum usque annum, indito in
 ‘ id instrumento argenteo apertum servabatur, juxta
 ‘ cum humore ichoroso, successivi plurimi lapilli pro-
 ‘ venerunt, diversæ magnitudinis, formæ & figuræ,
 ‘ sic ut alii triangulares, alii quadrangulares, alii sex-
 ‘ angulares, deprehensi sint, inter quos majores, glan-
 ‘ dibus faginis, minores vero, granis ericæ similes
 ‘ erant.

‘ Idem coloris sunt extrinsecus sub-puniceæ, instar
 ‘ castanearum nondum omnino maturarum, inducti
 ‘ tenui quodam cortice, intrinsecus lutei instar rhabar-
 ‘ bari,

‘ bari, quo ægrotus sæpius utebatur. De cætero la-
‘ pilli dicti sunt friabiles, pondere admodum leves, ac
‘ numerum eorum novem annorum spatio excretorum
‘ quingentenarium aut sexcentenarium æquare, hære-
‘ des ægroti affirmant; eorundem etiam lapillorum
‘ nonnullorum numerum ad 80 apud me asservo.
‘ Quamdiu vulnus apertum conservatum est, et lapilli
‘ excreti sunt, cætera vir ille benè valuit, et ad quæ-
‘ vis sua munia obeunda, supra morem ætatis, expedi-
‘ tus & alacer; quamprimum vero vulnus sua sponte
‘ coaluit, in alios morbos incidit, præcipuè vero in-
‘ terdum in Asthma, interdum in icterum, sæpius in
‘ Diarrhæam, quorum morborum unus tandem quo-
‘ que ipsi vitam extinxit, postquam 72 ætatis annum
‘ accessisset.’ *A Godofr. Thilesio.*

An extraordinary incysted tumor formed in the middle and very substance of the liver.

IN the year 1763, a Surgeon of eminence in the City of *Norwich* desired a Physician, with me, to see a girl about nine years of age, who had a swelling upon the region of the liver, extending almost across the *abdomen*, and into the *thorax*, as evidently appeared by the ribs bulging there on the right side, quite to the superior part of it. It was supposed to proceed from a contusion received by a fall three or four years before; and, upon strict examination, the disease appeared to us an enlargement of the liver: besides which, we were also very sensible of a fluctuation of some kind of fluid. The child was in constant pain, labouring much for breath; on which account, a few days after, at the mother's earnest entreaty, the Surgeon was induced to make a puncture with a lancet, rather to satisfy her importunity, than expecting any advantage wou'd accrue. Only a small quantity

quantity of fluid was discharged, and next day she died.

UPON opening the body, we found the liver of an enormous size ; it had forced its way almost to the *clavicle*, carrying the *Diaphragm* with it, and compressed the right lobe of the lungs to such a degree, that it cou'd not be inflated with air. It also adhered very strongly to the *Diaphragm*, as did the lungs to the *pleura* ; and the heart, flabby and shrunk, was reduced to very narrow limits, on the other side. In the very body of the liver was a thick cyst, resembling tripe, which contained near five pints of a lymphatic fluid lightly tinged with bile ; which cyst was so entirely disengaged, that upon making a large longitudinal incision into the substance of the liver, it instantly slipped out to our great surprise.

A singular case of the stone.

J. H. of P. aged 48, had been subject to the stone from his infancy; was searched, and shou'd have been cut, at eight years of age. His constitution was naturally robust, but he had much impaired it by drinking, and living a very intemperate life.

THE operation was performed, on *June* the 8th, 1746, after *Marianus's* method, by Mr. *Harmer* late of *Norwich*, an experienced Lithotomist. It was found impracticable to extract the stone, through a wound of the common size, which the operator had made, or to break it by the force of the *forceps*; therefore, at his desire, I divided the parts occasionally, as he continued a gentle extraction.

THERE was no reason to expect the wound wou'd ever be perfectly healed, after the extraction of a stone of that enormous size; but he had no symptoms that threatened his life in consequence of the operation. He died in *April* 1751, and constantly walked abroad till a few days before his death.

THE

THE stone is represented in pl. 9. fig. 1. It weighed near 15 ounces, and I believe is the largest we have upon record, taken from a living subject. I have it now in my possession. It is of a hard texture, and has a substance like *spar*, to a considerable thickness, upon many parts of its surface.

The wound remained in a foul and bad condition, and was made worse by being constantly wetted with the urine, which prevented all applications from having their proper effect. These circumstances induced this poor, unhappy sufferer, to endeavor to tempt a little favourite dog to lick the parts : and in a short time he was so well instructed in his business, that whenever his master laid down and uncovered them, he immediately went to work with his tongue, which afforded a pleasing sensation ; and then the application of soft, dry linen cloths, gave him more ease, than any applications his Surgeon furnished him with. As long as he lived his dog was his Surgeon, and kept the wound tolerably clean and easy, to his great comfort and satisfaction, as he often told me.—*Belloste*, in his Hospital-Surgeon, has a dissertation upon the balsamic qualities of a dog's tongue, in a letter to his friend *M. Sancaffani*, written in answer to some queries.

A case in which sixteen stones were extracted out of the *Urethra* and *Bladder*.

THE person from whom these stones were taken, as represented in pl. 9. fig. 2. was cut for the stone at four years of age, by Mr. *Donne* of *Dereham*, an expert Lithotomist, as well as a very able Surgeon. Nothing particular occurred in the operation ; but when the wound was almost cicatrized, the urine not having passed through it for near a week, as the child was tumbling upon the bed, he fell astride on the frame of the bedstead ; by which accident the wound was broke open, and the adjacent parts violently contused ; and afterwards it cou'd not be perfectly healed.

HE was again brought under Mr. *Donne's* care ten years after, who, upon strict examination, discovered a hard body, in the course of the *Urethra*, from the *Scrotum* into the bladder. These stones
were

were then easily extracted, through a wound of between two and three inches long. All of them were contiguous, and bedded the one into the other. That which appears of an irregular, oval figure at one end, was lost in the *Scrotum* ; the two at the other end, being all that were found in the Bladder, much resembled the ball and socket of a bone, and at first sight had more the appearance of bone than stone. All the other were like alabaster in color, and of as fine, or rather a finer polish. Various attempts were made to cure the wound, but all in vain. When I saw this patient, he was a stout, strong man, aged 24, and seemed not to want health in any other respect.

I HAD the above narrative given me, as well as the opportunity of examining the patient, when I was with Mr. *Donne* in *November* 1755, on account of his cutting a young gentleman for the stone ; in whose case, and also in the operation, there were some remarkable circumstances. It was observed, that the patient's bladder was frequently seized with a spasmodic contraction, and that his urine always ran from
him

him then involuntarily. As soon as incision was made into the staff, this spasm forced out the urine, before the operator cou'd introduce the gorget into the bladder; and upon introducing the *Forceps* he cou'd not find the stone: after searching some time he withdrew them, felt with his finger, and desired me and another Surgeon to do the same: we cou'd not feel any, but all of us were sensible of an unusual stricture, at the extremity of our fingers: after a little farther search in the common posture, we removed the ligatures, and placed the patient in an upright sitting posture, and then pressing strongly upon the *abdomen*, relaxed the stricture, and brought the stone instantly down to the neck of the bladder, when it was easily extracted.

THIS patient was an unpromising subject, much emaciated and hectic; yet the symptoms after the operation were very favourable, and he soon recovered a good state of health.



Fig. 1.

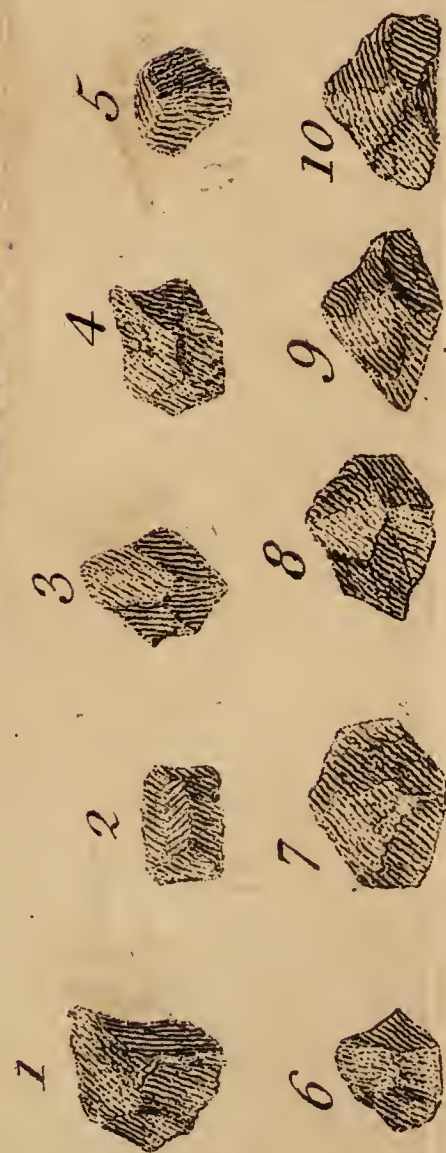


Fig. 2.



Of stones long fixed in the *Urethra*, happily removed, in a short time, with great ease.

IN the year 1761, I was called to a person upwards of fifty years of age, under a total suppression of urine of two days continuance ; and who for many weeks before had voided his urine *guttatim*, attended with great pain. The cause of this complaint in the *Urethra* was supposed to be a stricture, or some other venereal symptom, he having long been subject to that disease, in a great degree. I introduced a bougie, and, at two or three inches from the end of the *Penis*, met with an obstacle, which irresistibly prevented its passing. I then tried with a small *catheter*, and by that found the resistance was owing to a stone ; with some difficulty I got the instrument past it, but met with two more stones, before it reached the bladder. By this means I drew off about four pints of foul urine : and immediately

M

after

after this evacuation, I injected fine oil, by an ivory syringe with a long slender pipe, let him bleed, ordered an emollient clyster, and an anodyne draught ; earnestly desiring him to drink common emulsion, and such kinds of liquors very freely ; and that oil might be injected every hour or two, in the manner which has been directed. This method succeeded so happily, as to procure the patient immediate relief, after having been long in the utmost distress ; and in the space of eight hours, the canal being well lubricated with the oil, by the current of the urine alone, three angular stones, of a considerable size, were expelled with very little pain.

By the same means a few months ago, I relieved a young man brought to me by a Physician, who had a stone lodged in the middle of the *Urethra* ; but in this case the symptoms were not so violent as in the preceding.

UNDER such circumstances as these, putting the patient into a warm bath immedi-

ately

ately after administering an emollient clyster, and injecting the oil, may greatly assist in the expulsion of the stone.

That great and good man, Doctor *Hales*, to whom the world is infinitely obliged, invented an instrument resembling tweezers, passing through a silver *canula*, in order to extract stones out of the *Urethra*, and first communicated it to Mr. *Serjeant Ranby*, which received his approbation, as well as that of many other Surgeons.—See his Statical Essays, at the conclusion of Exprim. ii. upon the human *Calculus*.

The case relating to the three stones
described in Pl. 9.

MR. P. a very reputable tradesman in the City of *Norwich*, now upwards of sixty years of age, voided those stones when about sixteen years old. Before that time he had never suffered any acute pain in the region of the kidneys; but by a violent shock in a fall down stairs, the stones were dislodged from their long residence; and then pain to an excessive degree immediately ensued. In their passage through the *ureters*, the pain was not quite so excruciating as in passing through the *Urethra*, as he says he well remembers. They are of a pale brown color, not ponderous; their surface, to the very extremity of the points, have an uniform high polish, resembling china-ware; probably acquired by the friction of the urine, mixed with fabulous matter, in their quiescent state, their points being fixed in the uriniferous *ducts*: for admitting they laid all together in one pelvis, their figure must prevent their attrition, to produce such an effect, as every part of them

them cou'd not possibly come into contact. After the expulsion of these stones, he used, now and then, to have nephritic symptoms, but never to any great degree, till *April* 1763, when I was desired, by an ingenious Apothecary, to attend him. The fit was brought on by a sudden shock in a coach, and was removed by the common treatment, without any appearance of a stone or calculous matter; but it might escape with his urine unobserved upon going to stool. At this time I was shewn these stones, of which I took an exact draught, with my pencil, and received the preceding history of the case, from the patient's own mouth, who is a man of great veracity.

A case of the stone in a woman,
attended with some uncommon
circumstances.

MRS. T. of A. aged between forty and fifty, after having been severely afflicted with the stone for about ten years, and used various medicines to no purpose, had recourse to Mrs. *Stephens's* Lithontrip-tics; but with no better effect, though she gave them a fair trial, in eleven months regular perseverance. Growing daily worse in all respects, she resolved to submit to the operation, shou'd it be thought advisable, her constitution being much impaired, and having a constant discharge of purulent matter from her bladder.

August the 17th, 1740, she asked my advice, and after well considering all her complaints, I was of opinion that it was right to extract the stone, though the event of the operation cou'd not but be looked upon as very precarious; for by passing my
finger

finger up the *Vagina Uteri*, I cou'd plainly discover it was of a large size; the friction of which had caused inflammation and ulceration in the bladder.

AFTER putting her in the usual posture for the operation, I intended to have proceeded in the common manner, by dilating the *Urethra*, and making an incision as shou'd be found necessary to facilitate the extraction of the stone; but finding with my finger, that it laid very favourably to be cut upon, through the *Vagina Uteri*, now considerably dilated, I altered my original design, and, with the approbation of two experienced Practitioners, cut directly upon it, and extracted it with very little pain to the patient, or trouble to myself, compared with what a stone of between three and four ounces weight must unavoidably have occasioned, by performing the operation in the common method.

THE symptoms after the operation were the most gentle; the ulceration of the bladder soon healed, by soft, balsamic injections, and she was perfectly cured in three weeks, without any defect remaining

in the retentive faculty. I have since been concerned with other Surgeons, in two cases similar to this, who were induced to practice the same method, and which succeeded as happily.

Concerning the use of the *cutting-gorget*, &c.

THE use of the common *gorget*, as improved by Mr. Serjeant *Hawkins*, obviates an accident, which may happen in the lateral operation, when performed by the most skilful artist ; but the cutting part of the edge, for a very obvious reason, shou'd not extend above one third or fourth of its length ; and it shou'd have a small shoulder, that it may enter with the greater facility.

SINCE this improvement by that excellent Surgeon, whose merit has raised him to the highest station in his profession, other *cutting-gorgetts* have been invented ; but his is preferable to any I have seen, on account of its simplicity and ready use : and I have examined the parts, after doing the operation upon a dead body, and found they were cut exactly in the direction recommended by the late Mr. *Chefelden*, in his method of performing the lateral operation, without running any hazard of wounding the *Rectum* ; a circumstance which has happened to the most judicious *Lithotomists*.

I have used it many times, without any apparent inconvenience either in the operation or after it ; evidently with great advantage in some instances.

THE first was in a child of eight years old, who had a very bad constitution, and was an unpromising subject, having a variety of complaints besides the stone ; yet, in this case, the wound was perfectly healed in nineteen days.

THE second was in a patient of eleven years old, who had a stone of full three ounces weight, the external *Lamina* of which, not bearing equally upon the next, cracked in the *Forceps* in many places ; but it was extracted, without any of the pieces separating. Two days after the operation, he was sensible of an occasion to make urine, which he voided through the *penis* with a pretty full and strong stream ; and very little passed by the wound after that time, which was more speedily healed for this reason.

IN another case where I used this *gorget*, the subject was about twelve years old, who had symptoms of the stone soon after he

he was born, and had taken a great quantity of soap medicines for a long while, by the advice of a Physician. Here it appeared the stone laid constantly at the neck of the bladder, where it had caused an uncommon thickness and hardness of the parts, as far as we cou'd feel with our fingers introduced into the *Anus*, with ulceration; from whence much purulent matter was continually discharged, and being mixed with the urine, was detained between the *Glans Penis* and the *Prepuce*, excoriating and ulcerating those parts; for the *Prepuce* was so much contracted at the end over the *Glans*, that it wou'd not admit of the smallest *sound*; which circumstances made circumcision absolutely necessary before *Lithotomy*: and besides these unfavourable circumstances, he had a *Procidencia Ani* always upon going to stool, and often at other times, from extraordinary irritation at the neck of the bladder. On account of the hard and unyielding condition of the parts thereabout, the *cutting-gorget* appeared of singular service in this case, to my Brethren who were present at the operation, as well as to myself. The stone was very large and soft,

soft, like sand and clay mixed together ; consequently it broke into innumerable pieces, which were all extracted, and the operation succeeded happily. The wound was perfectly healed, though with as much trouble and difficulty as the operation was performed. *Bougies* greatly assisted in the cure, by introducing them occasionally, as they cou'd be born, to recover and preserve the natural passage of the *Urethra*.

FROM some considerable experience I have had, in the use of this *cutting-gorget* in Females, I have reason to believe it may be found as useful as *Mons. Le Cat's*, or *Mons. Pouteau's Lithotomes*, invented by those ingenious Surgeons to answer the same purpose.

IT sometimes happens, both in males and females, that besides the difficulty of extracting a large, rough, irregular stone, there is also great danger of lacerating the bladder, unless a considerable enlargement of the wound is made ; and when that has been omitted, I have seen some very unlucky accidents attend a violent exertion in extracting the stone. In order to obviate
such

such inconveniences, I think, instruments, which may be called *dilators*, something in form of a *gorget*, only broader, much less concave, very thin and without any beak, may greatly facilitate the extraction, and defend the bladder effectually against laceration or other injury. After being oiled, one of them may be slipped in between the stone and the bladder on each side, and managed by proper assistants, when the Operator has laid good and clear hold of the stone; and the *forceps* will sufficiently guard the bladder above and below, and the mere act of extracting the stone, under these conditions, will also as effectually dilate the parts, when that motion is performed gently and gradually.

See Pl. 10:
Page 192.

As I apprehend due attention to these means may prevent fatal consequences, I submit my thoughts upon this matter with the greater freedom and willingness to the consideration of my candid Brethren: and from the same motive, I also here introduce the following remark, which a late attendance in an operation gave me an opportunity of making. In this case, the bladder collapsed so closely about a very long stone of a conoid figure, with the point forwards, that

it

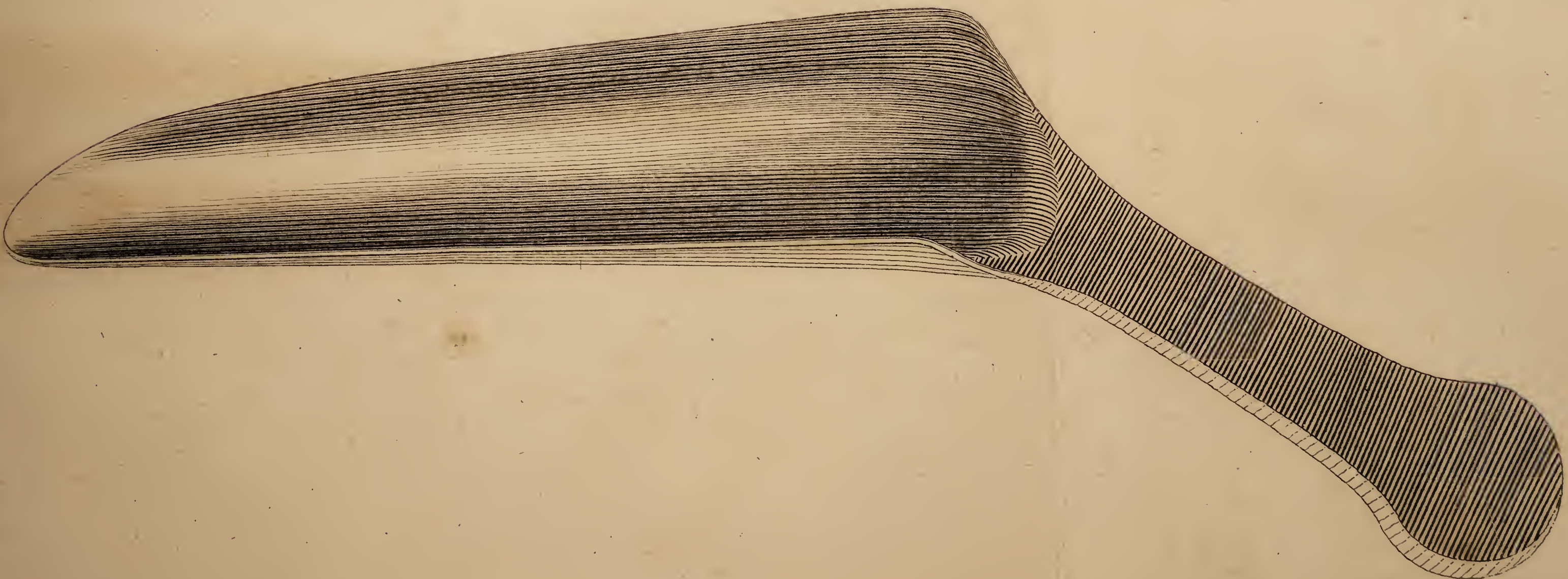
it was with the utmost difficulty the Operator cou'd disengage it, and charge the *forceps* without taking hold of the bladder at the same time, which he very studiously and cautiously endeavoured to avoid ; and this circumstance prolonged the operation full a quarter of an hour. From what I cou'd here plainly discover with my finger, introduced at his desire, I believe a pair of *forceps* having long and slender blades, and separated at the joint as those used in midwifery, wou'd have been found very convenient, by giving an opportunity of conveying one blade at a time, first above and then below the stone, or as the situation of it, and other circumstances, shou'd have directed the Operator, by searching with his finger ; conducting them upon it exactly to the appointed part, giving the first to be held by an assistant, whilst he introduced the second : and in this case I am inclined to think, that by a blade of these *forceps*, the stone might have been dislodged, and brought forward, so as to have been extracted with ease.

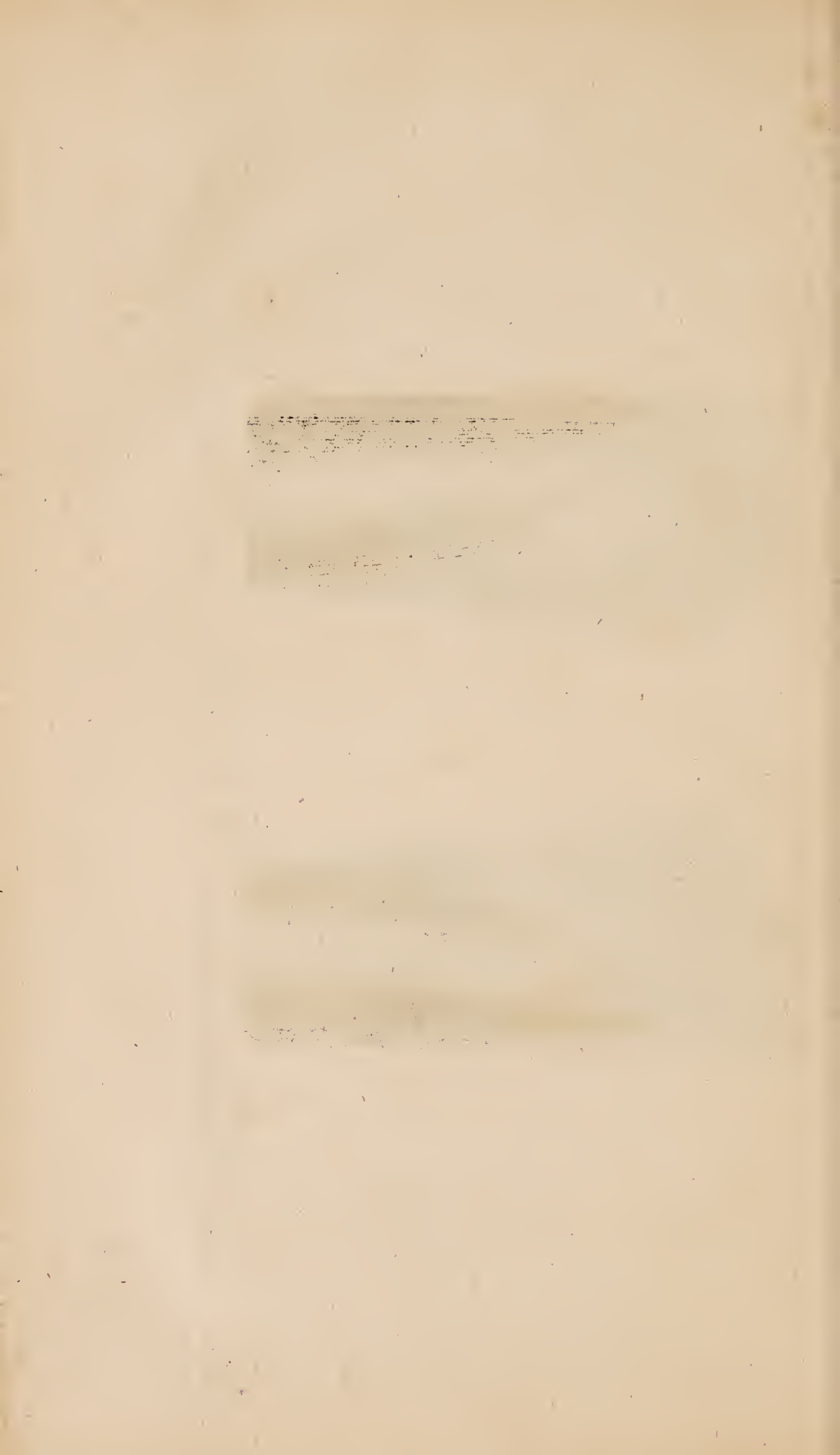
THOUGH this is the most striking, it is not the only instance which I have seen, where such a kind of *forceps* might have proved

proved very useful. For the reasons I have assigned, had I not given over this operation, I wou'd have provided myself with the instruments I have been recommending, of various sizes, to be used upon the emergencies I have specified : however, I have had much conversation upon this occasion, with several able and experienced Surgeons, who readily agree with me in the evident utility of these instruments, which I proposed to their consideration, and some of them, to shew their farther approbation, said they wou'd order such to be made directly.

P L A T E I O.

Sketches representing the *Dilators* mentioned in the remarks upon *Lithotomy*, and shou'd be had of various sizes, as well as the *Gorget*s.





A very singular complaint in the
bladder.

August the 13th, 1765.

THE patient is about thirty years of age, naturally of a good constitution, and now apparently in better health in general than cou'd reasonably be expected, considering what he has suffered for many years.

SEVEN years ago, and never before, as he positively avers, he contracted a slight *Gonorrhœa*, which was attended with no particular circumstances; but he very unfortunately fell under improper management. Instead of bleeding, lenients, and a strict observance of a proper regimen, many doses of strong mercurial purges were given him; with which he was also permitted to go abroad, and upon catching cold had his mouth in some measure affected by the mercury. Soon after he took *Bals. e Copaib.* liberally, by which the running was

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totally

totally stopped in a few weeks; but the strangury immediately increased, and he has never since been free from it. The most violent strainings and extreme pain constantly attend the voiding his urine, the latter of which always continues some considerable time after. The most rational treatment of the ablest Practitioners both in the Country and in *London*, have afforded him no relief of any consequence, notwithstanding his strict, long and regular observance of their advice in all respects, and under their immediate inspection. The severity of his pain has long obliged him to the free use of *opiates*; and sometimes his distress and agonies have driven him to the necessity of taking two ounces of *Tinct. theb.* in 24 hours, as he positively assured us, and yet this enormous quantity wou'd only procure him a little ease, but no sleep.

It seems highly probable that the maltreatment, at first, might be the cause of fixing an inflammation upon the neck of the bladder, *prostate gland*, &c. terminating in an *abscess*, and leaving the parts in an ulcerous and fungous state, in which they evidently

dently appeared by the discharge of much purulent matter mixed with *mucus*, and sometimes with pieces of a soft, fleshy substance. Under suspicion of a stone in the bladder, though he had never been subject to symptoms of it, prior to his venereal complaint, he was searched several times, both in the Country and in *London*, by the most experienced Surgeons, without finding any ; but all agreed, that by introducing the finger into the *Rectum*, they felt a great thickness and hardness about the neck of the bladder.

SOME years after, in *August* 1765, as mentioned in the beginning of this history, he came to *Norwich*, and consulted Doctor *Offley* with me in this most deplorable state ; bringing with him a narrative of his case accurately drawn up by an able and experienced Physician, under whose care he then was, giving an account likewise of every method that had been practised. After paying all attention to it, and receiving all possible information from the patient himself, who is a very sensible, intelligent man, we cou'd not see aught was to be ex-

pected from any other means, than what had been before sufficiently tried : and as he cou'd bear neither *bougies* nor injections, it appeared to us reasonable to propose, for future consideration, the making an incision into the bladder as in *lithotomy*, as the only expedient to alleviate, if not cure, such a direful calamity, by giving a free discharge to the matter. (a) And the Physician, (b) from whom we received the narrative, thought it a rational proposition highly worthy attention.

AFTER this, some other of the most eminent Physicians and Surgeons in *London* were

(a) Vid. *Hoffmanni Cap. VII de gravi spasmo & dolore vesicæ & adjacentium partium, § VII de curatione.*—*Boneti Sepulchret. vol. 2. pag. 634. & seq. de urinæ suppressione.*—And the authority of *Riolanus*, supported by experience, concerning the practice under consideration, shou'd by no means be disregarded, as he expressly says he has succeeded by such an operation in similar cases, in his *Enchiridium aureum*.

(b) Doctor *D'Urban*, of *Halesworth* in *Suffolk*, who has given many proofs of his judgment in the province of Surgery, having had great opportunities of seeing the practice, both at home and abroad, in several of the most considerable Hospitals, and being well acquainted with Anatomy.—My connection with this Gentleman prevents my saying more, to which his merit gives him a very just claim.

were consulted ; but a contrariety of opinions prevented the proposed operation ; tho' indeed nothing of consequence was offered to build hopes of advantage upon, more than was to have been expected from former methods.

THE patient still remaining in the same deplorable condition, upon the very strong recommendation and encouragement of some friends at *Rotterdam*, he went, in the spring of the year 1766, to try the efficacy of the famous medicinal waters at *Bareges* in *France*, and used them the whole season ; but without receiving any benefit. (*a*)

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WHEN

(*a*) The thermal springs at *Bareges* are at the foot of the Pyrenean Mountains, in a valley towards the south, where commodious covered Baths were built by order of the King.———See Sir *Christopher Meighan's* judicious and entertaining treatise on these medicinal waters, with a description of the village of *Bareges*, the adjacent Country, &c.

It is greatly to be wished, that there was a convenience for bathing under cover at *Bath*: I suffered much for want of such accommodation in the use of the Baths, by being exposed to the open air in a cold autumnal season. As *Bath* is a place of the highest repute for its salubrious springs, and to which multitudes of people of all ranks and conditions constantly resort, it shou'd be provided with every convenience to accommodate invalids for their benefit and safety,

WHEN this unhappy Gentleman came to *Bordeaux* in his return, his complaints still became more grievous ; and after being there detained some time, desirous of getting home, he adventured to proceed in his journey ; but immediately after his arrival at *Dover* he was freed from his painful existence ; and dying from home we were deprived of the opportunity of inspecting the diseased parts, to know the true nature and condition of them.

SOON after the preceeding case came under my notice, a Gentleman consulted me, who more than a year before, on account of a complaint in the *Urethra*, introduced a *Bougie*, where he incautiously left it, without being secured in the usual manner ; and in the night it slipped so far into the bladder, that it cou'd not be recovered ; and not being cut upon, as it shou'd have been immediately, it soon slipped quite in, and occasioned at the neck of the bladder a violent inflammation, which terminated in an *abscess* : and now his case is almost as deplorable as that I have been relating ; for which reason I advised this Gentleman, as I did the other,

other,

other, to go to *London* for farther advice, with a view of having it particularly considered, how far the operation might yet be thought advisable. (a)

(a) *Scultetus*, a practitioner and writer of great note at *Ulm* in *Germany*, about the middle of the last century, was not ignorant of the manner of making and using *Bougies* in diseases of the *Urethra*, as appear in his *Armament. chirurg.* Tab. 13. Fig. 9, 10. And from his invention it is not at all improbable, that *Monf. Daran* might take the hint, and improve upon it.

A case of a complete *Hernia*, attended with a mortification in an aged woman, perfectly cured.

THE wife of R. R. of B. about sixty years of age, naturally of a good, strong constitution, had a descent of the *intestine*, &c. December the 20th, 1752, to which she had been subject many years without ever wearing a truss for her security, or being advised to do so. The usual symptoms attending a strangulation of the *intestine* soon followed, and an Apothecary was immediately sent for, who taking her complaint for the colic, treated it accordingly three or four days; but the symptoms growing daily worse, accompanied with excrementitious vomiting, he then looked upon her disorder as the *iliac* passion, and had recourse to tobacco clysters, and at last to *Argent. viv.* giving her *℥iss* at four times, as he told me himself. Indeed he was very deficient in point of Surgery, and no proper measures had been taken, he being still ignorant of the true cause of her distressful

distressful condition, in which she had been nine days when I was called to her. I found the teguments much inflamed and vesicated, with livid spots here and there interspersed ; and the tumor having lost its renitence, I did not doubt of the *intestine*, &c. being in a mortified state. The *Abdomen* was greatly inflated, tense and painful ; she vomited excrements, cou'd bear nothing in her stomach, and had the hiccup, with a weak, quick and intermitting pulse.

UNDER these most miserable circumstances, her relations and friends were come to take their last leave of her ; and I also rather thought death wou'd have put an end to her misery in a few hours. All that appeared to me rational now to propose, and attempt for the preservation of her life, was to open the part forthwith sufficiently, in order to remove the strangulation of the *intestine*, and evacuate the *Fæces* ; though I must confess I cou'd not expect the case wou'd have terminated more favourably, than by leaving an artificial *Anus* in the *Inguen*.

THIS proposition being approved by the Apothecary, the patient, and all persons concerned, I forthwith made an incision between two and three inches long, through which there was an immediate discharge of many pints of black fluid, fermenting excrements, like what she had vomited several days, as they who attended her observed ; upon which discharge the inflation of the *abdomen* subsided, and she found instant relief. I then fomented the parts with a common *antiseptic Fodus*, dressed them with a soft animated digestive warm ; applying a warm *cataplasim* to them and all the *abdomen*, composed of bread, oatmeal, *Spec. pro Cataplasmate e Cymino* and the fomenting liquor, and advised all the dressings shou'd be renewed every six hours, or oftener, as occasion shou'd require, on account of the *fæcal* discharge : and I also directed the application and repetition of bladders of hot water, about half full, in order to preserve a due degree of heat from dressing to dressing ; nor did I forget to advise the discretionary use of temperate cordials, laxatives, and clysters of chicken or other fresh meat broth ; and that she shou'd, for some time,

time, be nourished only with liquid diet, taken in small quantities and often.

AFTER having thus agreed with the Apothecary and nurse concerning the method to be pursued, acquainting the patient also how much depended upon an exact observance of it, I left her to his care ; urging at the same time, in the strongest terms, his assiduous attendance, as the event of the most dangerous cases, often exceeds our expectations ; desiring he wou'd suffer nature to cast off the mortified sloughs, without using any violence to remove them. The next day he informed me the symptoms were favourable, that her diet did not offend her stomach, and that she had not vomited since the evacuation of the excrements in consequence of the opening. After having received a good account of the patient for a few days, upon a disagreement between her and the Apothecary, I was again sent for, and not being able, with my utmost endeavours, to reconcile the difference, she absolutely refusing to see him more, the care of her necessarily devolved solely upon me. At this time I found her sitting up in her chair, with

with a quick, strong pulse, and great flushing in her face. Upon examining into the cause of these appearances, I discovered they arose from transgressing the rules prescribed in regard to diet: for notwithstanding the strictest injunctions were laid upon her and the nurse in that point, yet this day for dinner, she indulged her appetite, with roasted chicken and strong beer, eating and drinking very plentifully. This transgression was very near subverting the fair hopes we began to have of her recovery: to prevent the ill consequence of it as much as possible, recourse was immediately had to bleeding, repeating it thrice in 24 hours, with other measures, in order to check the rising fever, and guard against an inflammation again seizing the weak and tender *intestines*; but it was many days before the danger vanished, which she was evidently thrown into by this indiscretion.

THE *Fæces* began to be evacuated by the *Anus*, on the third day after the opening, and they passed both ways till the beginning of *March*, which was about ten weeks; the discharge of them gradually lessened at the wound as it contracted; and it was perfectly

fectly healed, by the common treatment, soon after that time.

ON *February* the 4th, I first observed some of the *Argent. viv.* in the wound, that she had taken on *December* the 24th, and which passed through that as well as by the *Anus*, till the wound was perfectly healed. For many months afterwards she saw some, now and then, hanging about the excrements, divided into an infinite number of *globules*, which had lost their brightness, looking like lead long exposed to the air; and she generally was sensible of griping pains, preceding the stools wherein she observed it.

SHE now enjoys as good health as in the former part of her life, excepting the natural infirmities of old age; and is entirely free from the calamity she had many years before laboured under.

THE happy event of this threatening case, may teach and encourage us never to leave our patients, even in the utmost apparent danger and distress, without endeavouring to assist nature, by all the prudent and rational measures we can think of. I

I was lately concerned for an elderly man, who had a *Bubonocle* inadvertently opened for an *Abscess*; and who by such kind of treatment as advised in the preceding case, was perfectly cured. I afterwards recommended wearing a truss, with a very soft, easy, broad pad, by way of security. And many years ago I was an eye-witness to such a happy event, or accidental cure, in an old woman, who had a *femoral Hernia* incautiously opened, just beneath *Poupart's* ligament.

A remarkable *scrotal Hernia* in an infant about ten weeks old.

November the 3d, 1755.

MR. *Chaplin*, an ingenious man now in the Navy, desired me to visit this child with him, who was taken one evening with a violent fit of crying, and straining to vomit, which continued all night with short intervals. In the morning the mother, a poor, ignorant woman, perceiving a swelling from the *Inguen* down to the *Scrotum*, sent for an old woman, no wiser than herself, to advise with. They paid little regard to the prolapsed *intestine*, but rolled up the *abdomen* very tight, after their usual and absurd manner; which bandage obstructed the return of it, and produced the following terrible symptoms.

Two days after the child first complained, he voided a bloody matter by the *Anus*; which discharge, mixed with a small quantity of *Fæces*, continued eight or nine days.

MR. *Chaplin* was then called to him, and found the *Scrotum* vastly swelled, tense and inflamed,

inflamed, with the whole *abdomen* much inflated : on these accounts he ordered emollient and discutient fomentations, *cataplasms*, &c. with a proper bandage ; and this treatment mitigated the symptoms, though the child vomited as soon as he had sucked, as he had all along done.

A WEEK after, the *Scrotum* burst open, and the mortified *intestine* discharged the *Fæces* through two orifices, each about half an inch diameter, the one at the superior, the other towards the inferior part, at the distance of near two inches, which were dressed superficially with digestive and plasters of *cerat. alb.* in the common manner.

THE first time I saw the child was a few days after the openings in the *Scrotum* ; the discharge at which instantly removed the inflation of the *abdomen* and the vomiting ; but for the space of a week no excrements passed by the *Anus*. The preternatural évacuation of them then decreased, and they gradually resumed their natural course. The openings of the *Scrotum* healed up seemingly sound in about three weeks ; but the inferior one opened again, discharged excrementitious matter three or four days, and

and then finally closed. Soon after, the *intestine* fell down and returned according to the position of the body, beyond our expectation, considering the general maxim, that inflamed parts in contact will coalesce. The child was afterwards perfectly cured of the rupture, by the use of a common steel truss, exactly well adapted to the parts for ease.

A *scrotal Hernia intestinalis*, in which the operation was performed five days after the strangulation.

B. D. a farmer's servant, aged twenty-one, had been afflicted with a *Hernia* from his infancy, without any means having been used to cure him.

On *Tuesday* morning, *July* the 4th, 1754, the *intestine* fell down as he was at work alone in the field, where he attempted for many hours to relieve himself, as he used to do, but in vain: he then returned home, but concealed the nature of his disease, as he had always industriously done; and it was some days before he disclosed what he ailed, when all attempts to reduce the prolapsed *intestine* proved ineffectual.

LATE on the *Saturday* evening he was committed to my care; but my endeavors to replace the *intestine* having no better success, I proposed the operation to him and his master, as the only means of saving his
life,

life, and they readily consenting, I performed it early the next morning. The *intestine* was not mortified, tho' indeed it was much inflamed ; yet the operation succeeded, and he was perfectly cured in five weeks. From what appeared in this case, it is not amiss to observe, that the *intestine* may suffer a longer strangulation, without being mortified, than is generally believed ; but this condition of it may happen sooner or later ; from a variety of concurring causes and circumstances, worthy the utmost attention.

REPEATED bleeding, clysters, laxative and nitrous medicines, with a thin, cooling diet, taken frequently in a small quantity at a time, to avoid distention of the tender *intestines*, greatly contributed to remove the inflammation, which was upon the parts before the operation, and to prevent ill accidents in consequence of it.

THIS patient was near losing his life ten days after the operation, by the indiscretion and disobedience of the nurse, in allowing him such diet as I had absolutely forbidden, and omitting what I thought of the utmost importance for her to observe, joined with his own untractableness.

As diet, with the manner of giving it, is so essentially necessary in the cure of diseases, we cannot be too watchful, in seeing that our patients are strictly conformable in that article, and that the nurse does her duty in following directions ; more especially in such a case as this, wherein the least error or omission may prove fatal.

A case of a similar nature to the last, in which the operation was omitted without any good reason.

AN able Surgeon of my acquaintance was called to a vigorous young man, two days after having a descent of the *intestine*; in which condition he received a contusion upon the teguments of the *Scrotum*, by a fall from his horse.

AFTER various attempts to reduce the *intestine*, he proposed the operation, and many of the faculty were assembled: the majority opposed it; other methods were tried, which also proved fruitless, and the patient died eight days after.

I HAPPENED at this juncture to be at the Surgeon's house, who told me, with much concern, how he had been over-ruled, and that he thought a fair opportunity had been lost of saving the patient's life. Whilst he was giving me this relation, news was brought of the patient's death, and he then desired me to go with him to examine the state of the

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parts.

parts. In this case, notwithstanding the great length of time, we found no mortification upon the *intestine*, fallen down without *Omentum*.

WHAT probably misled the Gentlemen in the consultation, was the discoloration of the teguments of the *Scrotum*, arising from the contusion occasioned by the fall.

An old *Hernia* attended with singular circumstances.

February the 3d, 1765.

A SURGEON of great character and experience in the City of *Norwich*, desired me to visit a man with him, upwards of fifty years of age, in whose case the *intestine* had done its office several years in the *Scrotum*, though not increased to a great bulk : but the bowel was now under such a state of strangulation, that for many days he had been subject to the most dangerous symptoms, which attend an incarcerated *Hernia* ; the Surgeon not being able to procure him relief, by the most rational means. At the bottom of the tumor, of an oblong form, about six inches in length, resembling an *Hydrocele* of the *Tunica vaginalis*, we were very sensible of the fluctuation of some fluid, which we apprehended to be such as is collected, in those cases, between the *herniary sac* and the *intestine* ; and, from our careful observation and examination, we were of opinion that
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the *Sac* was burst. We deliberately considered every circumstance to direct our judgment, in this very unpromising case for the operation, it being past all doubt, that there was a strong coalition of the parts, which probably wou'd not admit of separation with safety : however, as there was no prospect of his living 24 hours longer in this condition, it was resolved, as the last resort, to make incision cautiously from the ring of the muscle to the bottom of the tumor ; by which it soon appeared, that our fears were too well founded, in respect to the coalition of the parts. Upon opening the tumor at the bottom, four or five spoonfuls of an aqueous fluid were discharged, and then the *intestine* presented itself in a sound state. After proceeding thus far, it was farther agreed between us, to slit up the parts, as far as we found with our fingers, that the *intestine* was detached from the *sac*, which was about two inches, and then enlarge the opening at the ring of the muscle, with a view of setting the *intestine* at liberty there, as much as possible. These steps were attended with success greatly exceeding our expectations ; for a
few

few hours after he was dressed, and put to bed again, having the whole *Abdomen* well embrocated with warm oil, and a flannel cloth applied to it, he had many plentiful evacuations by stool; upon which all his threatening symptoms, as vomiting, &c. soon after vanished, and returned no more. The wound digested kindly, a thin slough, like a *pellicle*, was cast off the *intestine*, and granulations of flesh ensued, that united with those proceeding from the wound, which was perfectly healed, by the common treatment, in less than two months, with a firm, good *cicatrice*. The part was left in a much better state than it had been for many years, so, that he was able to follow his former laborious employment of serving a bricklayer; at which work I lately saw him, and he told me he found no inability in performing it, nor the least pain or inconvenience in going to stool. He could not be prevailed on to wear a bandage, which was thought advisable, as a security against an accident; finding himself so well, he was regardless, and saw no future danger.

I

The treatises written by Mr. *Pott* and Monsr. *Arnaud* upon Ruptures, attentively read and considered, will be found good guides to direct our practice in this important

I WAS willing here to subjoin a few hints, alluding to the antecedent cases, and the observations which have been recorded by others, relative to *Herniæ*, submitting them to the consideration of my Brethren, in hopes that they may prove of some practical use.

WHEN the general rules have been strictly observed, and all rational endeavors and attempts have failed, to reduce the contents of a *Hernia*, certainly the sooner the operation is performed the better : but when we happen to be called too late, and there are evident signs of the *intestine* being in a mortified state, by the tumor having lost its renitence, &c. it appears to me upon reflection, very warrantable and reasonable practice, supported by some of the cases I have been mentioning, and the observations of others, to make an incision into the tumor, ample enough to evacuate the *Fæces* freely, which may effectually remove the strangulation of the *intestine* at the *abdominal* ring ;

important part of Surgery : and what is said upon the same subject, in the *Edinburgh Med. Ess.* and in the *Mem. de l'Acad. Roy de Chirurgie*, merit our particular attention, as well as what Mr. *Sharp* has to the same purpose, in his *Critical Enquiry*, to whom Surgery is greatly indebted.

ring, and then to treat the wound as a mortification, not being over busy with the knife, in cutting away what appears to have lost its vitality ; but allowing nature to throw off the mortified floughs, by the granulations of flesh, which may well supply the loss of substance, as I have seen by such management, far beyond my expectation. When it is a doubtful point, what condition the parts contained in the tumor are in, we must proceed with great caution in this operation, till we come at the *intestine*, and finding that mortified it is to be opened, and the stricture removed, by incision at the muscular ring, shou'd not the evacuation of the *Fæces* do that effectually. The case is then to be treated as has been advised ; for undoubtedly nature's operation is safest and most to be relied on, in separating the dead parts from the living ; though it will be proper to cut off the putrid floughs, as they grow loose from the teguments, *herniary sac*, &c. and it is essentially necessary to endeavour to prevent the falling of matter into the cavity of the *Abdomen*, by position of the body and otherwise ; taking great care at the same time that the parts therein contained do not tend
too

too strongly downwards, as upon attention to this circumstance also much depends.

THE few examples we have upon record of persons surviving *Herniæ* that have burst in a mortified state, may be sufficient encouragement to put in practice the measures now under consideration, for very obvious reasons : but before we do that, prudence teaches us to make proper *prognostics*, and to take all necessary precaution to defend our reputation, when we have to act in cases so circumstanced and precarious in their event ; as people are too apt to condemn the Surgeon, when his practice does not succeed, be it ever so rational.

The two following cases shew the necessity of sometimes departing from the general rules laid down in the application of Trusses in Ruptures.

A GENTLEMAN upwards of eighty years of age, who had long been afflicted with a Rupture, attended with a *Hydrocele* of the *Tunica Vaginalis*, had Trusses made for him in the common manner in the City near which he lived, in *London*, and at *Paris*; but in the use of all of them the *intestine* frequently slipped down. I found, upon strict examination of the parts, that the disappointment arose from a thickness of the *spermatic* cord, on one side of the *abdominal* ring, by which the pad of the Truss lost its power of acting, so as to prevent the descent of the *intestine*. It appeared to me that nothing cou'd be done but to have a pad of proper dimensions
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to enter and fill up the aperture precisely ; for by moderate pressure with my thumb, I could effectually resist the impulse of the *intestine* in the strongest efforts by the action of coughing. To effect this purpose, I advised the Truss-maker who had not succeeded before, though a very ingenious workman, to affix such a pad with a screw, in the centre of a much broader surface, to confine it more effectually, made soft and easy : and this always answered the end perfectly well, when properly adjusted and kept in the aperture.

THE other was the case of a Gentleman between seventy and eighty years of age, who had a descent of the *intestine* on each side, which would not yield to a common Truss, on account of the extraordinary thickness and make of the parts ; but one formed upon the principles and mechanism of the preceding, very happily succeeded, and rendered the patient's life easy to him, preventing the great danger to which he had long been exposed.

IN both these cases particular attention was paid, to make the parts of the truss to which the pads were affixed, so concave as to rest easy and steadily upon the parts.

An Hydrocele of the Tunica vaginalis taken for a scirrhus Testicle.

AN elderly Gentleman consulted me many years ago in this case, which had long been treated with mercurials both internally and externally. This method was not at all likely to succeed, had it been what it was supposed to be ; but it appeared to me indisputably an *Hydrocele*.

THE Gentlemen concerned did not agree with me in opinion as to the nature of the disease, nor was any alteration made in the treatment of it ; but some months after, when the patient's constitution was much more injured by it, and the tumor greatly increased, I was again consulted, and declared, that so far from seeing the least reason to depart from my former opinion, I was now more confirmed in it. The patient then submitted to a puncture being made with a lancet, by his Surgeon in ordinary, and more than a quart of a fluid like brown beer was discharged. He lived between
twenty

twenty and thirty years after, contented with this palliative method. The operation was performed a great many times, and he enjoyed a good state of health in all other respects, dying in a very advanced age, purely of the decay of nature.

THE suspension of every kind of tumor in this part, with a bag-truss, is absolutely necessary, as the pendulous situation of it weakens the contractile power of the vessels, and impedes the ascent of the fluids; and such support seldom fails of preventing or removing the pain of the loins, which is generally a concomitant of an enlarged testicle, from a stretching and irritation of the *spermaties*.

I have succeeded in the methods proposed for the radical cure of this disease, both by taking out an oval piece of the *Scrotum* and *Tunica vaginalis*, and by the application of a caustic the whole length of the tumor; but must give the preference to the former.——When it comes under consideration which method to chuse, the most strict examination is requisite, in order to discover whether the testicle itself is in a scirrhus state; and if that is a doubtful point only, it shou'd certainly determine us in favor of incision: for shou'd the disease prove so complicated, of which I have seen four instances, castration can be immediately performed; but to have that to do after the *eschar* is separated, wou'd be a very discouraging circumstance to the patient, as well as very disagreeable to the Surgeon, whose character as well as mind might suffer by it.

In an *Anasarca* of the *Scrotum*, I have several times made incision on each side of it with great advantage, without ever having a mortification ensue ; but there is reason to fear it from a languid circulation and abatement of native heat in a part so situated, which shou'd be well guarded against with internals, by the assistance of a Physician, which when it can conveniently be had shou'd not be precluded.

An *Hydrocele* taken for an *intestinal Hernia*, and treated accordingly.

A GENTLEMAN asked my opinion for his child, about three years old, who was supposed to have a Rupture. Upon strictly examining the parts, I discovered a tumor just below the rings of the *abdominal* muscles, upon the *spermatic* cord, extending, and gradually dilating, almost to the bottom of the *Scrotum*. I did not doubt of its being an *Hydrocele*, and in all probability it was rendered worse than it would otherwise have been, by being treated as a Rupture; for, till it grew too big, it was forced into the *Inguen*, and there confined with a steel truss.

I DIRECTED a fomentation prepared with discutients and astringents, to be used twice a day, and that the child should take now and then a few grains of *Merc. dulc.* mixed with *Rhubarb*, and wear a bag-truss. By this treatment the tumor was visibly diminished in a few weeks; but the Gen-

tleman desiring to take advice in *London*, asked me to give him my opinion in writing, with the method I had taken. The Surgeons whom he there consulted agreed with me, and the child was cured in a few months without altering the method.

A case of an *Hydrocele* of the *Tunica vaginalis* on each side, attended with some extraordinary circumstances, in which castration was performed on one side and the operation for the radical cure on the other, according to Mr. *Douglas's* method described in his judicious treatise upon this subject.

W. A. of H. upwards of fifty years of age, naturally of a robust and healthy constitution, which he had much impaired by intemperance, especially by drinking spirituous liquors; in a violent effort to raise a heavy weight, was sensible, to use his own expression, of a cracking in his loins as if something broke, and became immediately disabled for walking. Soon after this accident he observed a swelling on the left side of his *Scrotum*.

AFTER some months he asked my advice in this case, which appeared to me a true

Hydrocele of the *Tunica vaginalis*: I then opened it, discharging a quart of a limpid fluid, and he soon followed his ordinary employment again. Not long after this operation, the same disease appeared on the other side, and in about five or six months, I made a puncture with a common lancet on each side, introducing instantly a female *catheter*, and discharged from each about a pint and half of the same kind of fluid. In the space of between two and three years, I performed the operation five times on one side, and four on the other, either by a lancet or small *trocar*, which never confined him from his business more than a day or two.

ABOUT two months after the last operation, performed on each side, when the parts were again considerably distended with the fluid, he fell from his horse in a drunken condition; which accident occasioned a violent contusion and *Ecchymosis* upon the whole *Scrotum*, attended with great tension and most exquisite pain of the *Abdomen*. These symptoms were very threatening, and his life seemed to be in imminent danger; but repeated bleeding, lenient purgatives, and the anti-phlogistic

phlogistic method, consisting of medicines and diet, relieved him : still there was great reason to fear, from the remaining complaints and appearances, that the parts within the *Scrotum* had greatly suffered.

WHEN the parts were filled again I made punctures as usual, and on the side where I performed the operation first, the lymphatic fluid was mixed with blood, but on the other side it appeared as before. From what I now observed, I thought there was good reason to propose the method for the radical cure, which was attempted with the approbation of several able Surgeons, on *August* the 24th, 1756.

UPON cutting the teguments and *Tunica vaginalis*, I found the latter was grown almost cartilaginous and near half an inch thick. The *testicle* itself appearing decayed, like soft rotten liver, I altered my original design, and, with the concurrence of my brethren, removed it, as well as the *Tunica vaginalis*, taking up the *spermatic* artery with the needle and ligature, without including it in the thickened cord. I then cut off as much as I cou'd of the *Tunica vaginalis* on the other side, which was also
greatly

greatly thickened, but the *testicle* included in it was not affected. In the course of the cure a very thin slough, like a *pellicle*, was cast off the *Tunica albuginea* by granulations of flesh, which uniting with those proceeding from the other parts, a good, smooth *cicatrix* was induced, upon that incarnation : and afterward he did not want the power of procreation.

THESE operations were tedious and painful, and hazardous in their event ; but the symptoms in consequence of them were favourable beyond expectation. Emollient clysters frequently repeated, bleeding, pouring warm oil often upon the *Abdomen*, covering it with flannel and keeping bladders of warm water constantly over it and the dressings, gave him very sensible relief, and probably prevented bad accidents. Nothing happened to obstruct the cure, by the common treatment, and he was dismissed the house in seven weeks, able to follow his occupation without any inconvenience. He now enjoys perfect good health and strength, for a man of his age, often taking long journeys on foot without fatigue.

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The constitution, state and condition of the patient, who is about to undergo any capital operation, should be well considered before hand, that what is amiss may be rectified as far as possible, by diet, medicine, &c. in order to prevent accidents in consequence of it ; as well as early care and constant attention paid to every circumstance after the operation ; nor ought we ever to forget how essentially necessary it is, that peace and tranquility of mind shou'd be preserved in our patients ; to which end we shou'd studiously endeavour to strengthen their confidence in us, by our address and behaviour in all respects.

A case of an enlarged *Testicle* from a blow, which succeeded happily.

March the 17th, 1755.

MR. E. W. of M. a man of a very robust constitution, aged about thirty, sent for me on this occasion, a fortnight after the accident. The tumor was of a large size, inflamed, hard and painful, accompanied with a fever; and the *spermatic* cord was also greatly enlarged and rigid. I let him blood, and repeated that evacuation occasionally, seeing his blood was in a fizy state; gave him lenient purgatives, and nitrous medicines, advised an exact regimen, with the very liberal use of diluents, and directed a fomentation shou'd be used twice a day, with a portion of *Spirit Mindereri* in it, and *cataplasms* to be applied, prepared with oatmeal and the fomenting liquor, adding a little *Ol. Olivar.* to prevent

stiffness,

stiffness, and supported the part with a bag, strictly enjoining him to keep his bed, as an horizontal position wou'd most favour the retrograde motion of the fluids through the diseased parts, in the meandrous windings of their canals.

By this treatment all his complaints were soon abated; and when I found him in a good condition to bear *Mercury*, which was in about three weeks, I had recourse to that powerful medicine, though I had not the least reason to suspect any thing venereal in the case. I gave him four or five grains of *Merc. dulc.* rubbed with *Flor. Sulphuris* for four or five nights successively, and a lenient purge the next morning, still continuing the nitrous remedies, topical applications, &c.

AFTER persevering about a month in this method, the *testicle* was greatly diminished, the inflammation and pain quite gone, and but little hardness remained; I then directed instead of the other external applications, a mercurial liniment shou'd be

well

well rubbed in twice a day, and that he shou'd purge gently at due intervals, to prevent a *ptyalism*, which reduced the *testicle* to its natural size, and entirely removed the induration in two months.

A Cancer both upon the *Testicle* itself and the *Epididymis*, occasioned by a blow, in which case castration succeeded.

November the 9th, 1756.

I WAS desired to assist in this operation, performed upon a Gentleman about 50 years of age, naturally of a strong, healthy constitution.

WE found the *spermatic* cord in a much better condition than we expected, by examining it before the operation; but the *spermatic* artery was exceedingly enlarged, which we took up with the needle and ligature, without including the cord. The whole *Testicle* and *Epididymis* were in a true cancerous state, floating in a considerable quantity of lymph, contained in the *Tunica vaginalis*.

THE symptoms after the operation were very favourable, the case terminated happily, and the patient continues perfectly well, though

though the operation was unreasonably delayed, absolutely against our earnest advice, but he wou'd not consent to it sooner, notwithstanding our remonstrances, to shew him the increase of danger by deferring it.

I have been concerned in seven operations, performed upon patients of my own and others, wherein the *spermatic* artery was taken up alone, after a dissection of the sheath, in which no threatening symptoms ensued; but I have observed many bad accidents in consequence of tying the whole cord, even causing the death of the patients, as I verily believe; therefore I cannot forbear strongly recommending the discontinuance of that practice in castration, to the consideration of my Brethren; and have inserted two cases to enforce it.

A case shewing the advantage of taking up the *spermatic* artery alone, with the needle and ligature, instead of tying the whole cord as is generally practised in castration.

June the 4th, 1760.

A REPUTABLE tradesman in the City of *Norwich* had a rotten *testicle*, proceeding from a contusion by a fall twenty years before, which had long been accompanied with a *Bubonocoele*, a *Fistula* in *Perinæo*, thro' which the urine constantly passed at two apertures, and a *Procidencia Ani*. In this miserable state, I was joined in consultation with a Physician and Surgeon of eminence, the result of which, after deliberately considering every circumstance, was to propose castration, and to attempt, at the same time, to cut away the callosity of the *Fistula*. It was approved by the patient and his relations, and undertaken, after due preparation, and making a doubtful *prognostic*, to secure our reputation as well as we cou'd, in a case so dismally circumstanced.

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IN this operation the sheath of the cord was slit with the point of the knife, and then farther opened with a pair of very small crooked scissars, by which steps the operator shewed the vessel fairly, and I then took it up, without any difficulty, in the usual manner, with the needle and ligature, including only a little *cellular* membrane in it. No ill accident supervened, and the operation succeeded so happily, that the patient was perfectly cured of all his complaints, remaining so to this day.

A case manifesting the disadvantage, and dire effects, of making a ligature upon the whole *spermatic* cord in castration.

THE year after the last mentioned case, I was concerned with a Surgeon who chose to tie the whole cord, having never seen the contrary method practised ; but two days after the operation, I was sent for in great haste, the patient having some very alarming symptoms ; and the Surgeon, who practised midwifery, was at that juncture so closely engaged, that he cou'd not attend him. I found the patient incessantly straining to vomit, accompanied with a hickup, in a high fever, his *Abdomen* very tense, inflamed and painful, particularly complaining that the pain extended quite from the ligature, for which reason I cut it directly, no blood ensued, and he was sensible of some instant relief, upon removing that stricture. I then took away a large quantity of blood, repeated that evacuation ten hours after, as his pulse continued strong,

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and he was of a sanguine, plethoric habit, ordered a common clyster to be given immediately after the first bleeding, and a laxative mixture to be taken by little and little; that warm oil shou'd be well rubbed all over the *Abdomen*, keeping a flannel or a bladder of warm water constantly at it, and that he shou'd drink soft, diluting liquors freely, as soon as his stomach was in a condition to bear them. The vomiting, hick-up, and all the train of threatening symptoms soon abated, every thing went on well afterward, and he was perfectly cured, without any future bad accident. The case requiring this operation, was a large scirrhus *testicle*, just making the transition into the cancerous state.

I AM inclined to think, if the *spermatic* cord was to be totally divided, and wou'd admit of being left long enough, an assistant having firm hold of it, with his fingers and thumbs, upon compresses of cloth above and below, to prevent the vessels from slipping up in the sheath upon the division, the operator might take up the artery with the needle and ligature at the end.

end. An accident once happened in an operation, wherein I was concerned, requiring such steps, which succeeded very well, though the artery was larger than common. In general this vessel is but small, and perhaps, in some instances, the *hæmorrhage* might be stopped by compression alone against the *Os pubis* ; however, it is better not to run such a risk at any time. —By inadvertently cutting the cord too short, or when that circumstance proves unavoidable in this operation, the vessels may retract too far, and even into the *Abdomen* ; great danger of which I once saw and instantly prevented. This merits particular attention. — Besides the danger I have been representing that attends tying the whole cord, which is composed of many tough substances, I have seen great inconvenience arise from the slowness in digesting off the ligature, in the course of curing the wound.

Of a *Circocoele* that resisted all other methods of cure, and wou'd yield to nothing but castration.

December the 19th, 1758.

R. W. of T. received an injury both upon the *lumbar* and the *inguinal* region, by a piece of timber falling upon him in a stooping posture.

BLEEDING, gentle purging, and the common applications in recent contusions, &c. gave him so much relief at first, as to enable him to follow his business as a maltster again, in a little time ; but those means did not entirely remove his pain, which was most upon the *spermatic* cord.

Two or three months after, he applied to me again, his labor proving more than he was able to bear, complaining of a violent pain of his loins and the *testicle*, as well as the *spermatic* cord, which was very much thickened and knotted, the *testicle* itself diminished and the *Epididymis* enlarged ; and he

he was now admitted into the Hospital under my care.

NOTWITHSTANDING all the applications and methods both internal and external, in pursuance of the joint opinion of Physicians and Surgeons, the pain increased, and at length became so insupportable, that he cou'd get no rest night nor day, without the constant use of opiates in large doses; from which considerations castration was resolved upon. The operation was performed *July* the 20th, and he was dismissed perfectly cured *August* the 29th.

A case of a fungous excrescence upon one of the *Nymphæ*, from which proceeded a profuse *hæmorrhage*, bringing the patient's life into imminent danger.

IN the year 1760, I was desired, with another Surgeon, to examine the state and condition of a Lady of a very delicate habit, about thirty years of age, and to make report to two Physicians, who attended her in a bad fever, accompanied with very threatening symptoms. They had been informed of a profuse *hæmorrhage*, supposed to be *uterine*, with the additional alarming circumstance, that it was apprehended the *Vagina Uteri* was mortified; both which were strangely misrepresented. We found an excrescence about the bigness of a small walnut, like a fungus, upon one of the *Nymphæ*, from whence the *hæmorrhage*

had

had proceeded some time, and weakened the patient excessively ; and from some part of the excrescence having a livid aspect, arose the apprehensions of the mortification. We made our report accordingly, that the effusion of blood was not *uterine*, nor the *Vagina Uteri* in a mortified state, declaring it was our opinion, that the excrescence might safely be extirpated by incision, and the *hæmorrhage*, in all probability, restrained by that means. The result of our conference with the Physicians on this occasion, was to have the operation performed, with the patient's free consent ; it was proposed to her, she readily consented, and it was then done directly, stopping the *hæmorrhage* in consequence of the operation by the needle and ligature. The wound was treated in the common manner, and she lived some time after it was perfectly healed, without any return of bleeding, which event answered the expectations we gave the Physicians ; but her other complaints wou'd not yield to their judicious prescriptions.

It was imagined she might have sustained an injury in a hard labour, some months before, to give rise to the excrescence; but this point cou'd not be determined with any certainty.

A Fistula in Ano cured in a singular manner, by making an opening into the Vagina Uteri.

IN the year 1761 I attended a worthy Magistrate in the City of *Norwich*, in the most extensive *Fistula in Ano* I ever saw cut, which so happily succeeded, that he was perfectly cured by the operation, even beyond expectation, his constitution being much impaired; in which case the *bark* was of singular service.——During this attendance, as an Auxiliary, his Surgeon in ordinary desired me to visit a woman, between 30 and 40 years of age, who had been his patient more than six months, in a similar case, discharging an immoderate quantity of a fetid *sanies*; and she was much emaciated, with a kind of hectic from absorption of such putrid matter, and loss of appetite.

THE Surgeon had opened several *sinuses* in different directions, and treated the case judiciously :

judiciously ; but one remaining pretty high up the *Rectum*, tending directly towards the *Vagina Uteri*, from whence the matter was discharged, that he durst not venture to open, perplexed him very much ; on which occasion he desired me to examine the state of her case with him. By introducing a probe, properly curved, into the *Sinus*, and my finger into the *Vagina*, I found it terminated just above the *Carunculæ myrtiformes*. I proposed to his consideration, under these circumstances, the drawing a seton through the *Rectum* into the *Vagina*, to which he readily agreed, and the operation was easily performed as has been mentioned, with an instrument a little more curved than a *tonsil-needle* having an eye towards the point (a). It succeeded to our wish ; the discharge was soon obtained, at this depending opening in the *Vagina*, with little or no inconvenience. After continuing the seton about three weeks it was left out, and the cure completed without any farther trouble ; but a defficcative injection was made use of some time, both into the *Rectum* and *Vagina*.

THIS

(a) See Treatise on Wounds.

THIS woman ventured to marry soon after she was cured, and brought forth a strong, healthy child in less than a year; since which she also remains perfectly well.

See Mr. *Pott's* treatise lately published upon this subject.

A case in which the *Placenta uterina* was covered with Ossifications, communicated to me by Mr. *Donne*, which we examined together, and then sent to Doctor *Hunter*, as a curious Anatomical Preparation.

A GENTLEWOMAN about twenty-five years of age, of a delicate but healthy habit, sent for me on the 6th of *November* 1761, after having been in labour some hours. On examination I found the *Os Uteri* considerably dilated, the membranes protruding almost to the *Os externum*, which I broke immediately, as there was a considerable flooding. The head of the child came down into the *Pelvis* in a pain or two, and she was soon after delivered of a strong healthy child. The flooding which had stopped by breaking the membranes,

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and the child's head descending low down into the *Pelvis*, returned again with so much violence, that I judged it necessary to bring away the *Placenta*. Upon introducing my hand into the *Uterus*, I laid hold of the *Placenta* entirely separated from the *Uterus*, every part of which in contact with my hand, was so full of sharp points, that I brought it away with pain to myself : these sharp points were innumerable ossifications, forming a fine net-work resembling the fibrous coat of a melon, which covered the whole surface of the *Placenta*, that was attached to the *Uterus*. My patient recovered in the usual time without any particular or bad symptoms, or more violent after pains or discharges than she had before experienced, this being her second child.—

October the 4th, 1763, I attended the same patient again, and then delivered her of a healthy child. The *Placenta* had now ossifications sufficient to prove the fact, which determined me to secure it ; the first to my great mortification, and contrary to my request, having been destroyed. I have only to add farther, that about four months since I brought away from the same person, a
third

third which had some ossifications, these indeed were so trifling that they had passed unobserved; but the extraordinary appearance of the first, the same again in a less degree in the second, excited my curiosity to examine minutely the last.

Doctor *D'Urban* tells me, he once met with a case, where the *Placenta* was separated with uncommon difficulty; and upon examination found it beset with cretaceous and ossified substances.

A case in which the *Os Coccygis* passed through the *Rectum* in a very extraordinary manner.

In July 1760.

A GENTLEMAN's child, two years and a half old, naturally of a strong healthy constitution, had been treated some time as in a worm case, with a variety of medicines for that purpose; but her complaints increased till she voided what was supposed to be a stone, after taking a purge. A Physician was consulted next day, and had the following history of the case related to him, with what has been mentioned, by the mother of the child, and the servant who had the care of her. They said, for some months past, that they observed without any evident cause the child lost her florid and natural complexion, grew wan and pale, extremely pensive, fretful and uneasy, and upon every motion, or being taken up, or stirred in any manner, cried out and screamed, as if in violent pain. From being fond
of

of exercise and playful, she never liked to move, and when obliged to do so, always moved with uncommon slowness and caution, as if under some extreme uneasiness. Some days before she passed, what was thought a stone, she seemed to be constantly in great agony, upon going to stool, became exceedingly pale and faint, requiring to be laid upon a bed for some time after, to recover her.

WHEN the Physician examined the substance, he was convinced of its being a bone, at first sight, and did not doubt of its being the *Os Coccygis*. He strictly inquired whether it was certain, that the child had voided this bone by stool, and the answer was ; she had taken a purge against worms, upon which account, after every motion, her stools were carefully examined, in order to observe if any worms came away, and that when the servant found it in one of them, she immediately shewed it to her mistress.

AFTER hearing this relation, the Physician desired the child might be brought to
Norwich

Norwich to have the parts examined by a Surgeon, as soon as she cou'd bear the journey ; and I was then desired to attend her with the Physician. The substance of the preceding relation was repeated, and upon a view of the bone, I cou'd not hesitate a moment, in pronouncing it to be the *Os Coccygis*, having lost its point. The *Anus* appeared a little inflamed and excoriated, but the child bore the introduction of my finger into the *Rectum*, and moving it there, in every direction, without complaining, where I found nothing amiss, any more than if it had never been injured ; and this examination was made about a week after the expulsion of the bone. The slight inflammation and excoriation, at the verge of the *Anus*, were soon cured, by the application of *Cerat. alb.* and *Unguent. saturnin. mixed* ; and she has never since had the least complaint in these parts ; but what she suffered, on this occasion, has irreparably injured her constitution, and health in general.

As it appeared to us highly probable, we suspected this disease might proceed from a

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hurt, by a violent fall upon her breech, the shock extending to the juncture of the Os *Coccygis* with the *Sacrum*; and, in consequence of which, that an inflammation and *abscess* might ensue, though they passed unobserved; but our interrogations cou'd not bring such an accident to light.

NATURE alone wrought a very notable cure in this case, the singularity of which made some Gentleman of the faculty doubt of the fact, and too hastily express themselves concerning it; but the authenticity of the evidence incontestibly supporting its reality, must silence all vague conjectures.

A Dropsy situated under the *Rectus Cruralis*, and between the *Vastus internus* and *externus* muscles, immediately above the knee, which had long been looked upon as an incurable White-Swelling.

February the 2d, 1753.

H. C. aged 45, was brought to me by the Officers of the Parish of T. and gave me the following account of himself. That he first took notice of a swelling about six years before, upon the fore-part of his thigh just above his knee, attended with a dull sensation of pain ; that the swelling gradually increased, and, for a year or two past, that the pain had sometimes been very acute. He also told me, that the methods which had been taken, by those under whose care he had been, rather increased his complaints, and that they advised him not to suffer it to be opened by any means.

FROM my observation and experience in four cases, which appeared to me of a simi-

lar nature to this, wherein I had succeeded, I did believe there was a lymphatic fluid collected between the muscles, which was absolutely necessary to be evacuated by opening, having been so long extravasated, that there was no probability of its ever being absorbed ; I therefore did not at all hesitate about advising to have incisions made into the tumor.

He was of a lax habit, and his health in general not very good, but when I had corrected a little disorder in it, which appeared proper to be attended to, I opened the tumor both on the inside and outside of the limb, by incisions two or three inches in length, aiming to make them correspond with the interstices of the muscles, and discharged more than a pint of inspissated lymph: I then drew a seton thro', and continued it 'till I thought the cavity might be a good deal contracted, at which time I left it out, touched the edges of the wounds with *Caust. lunare* repeatedly, so as to prevent their uniting too soon externally, dressed superficially in the common manner, and applied a laced knee-piece, with an easy compress affixed to it, to rest upon the top
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of the thigh, the full extent of the cavity. The discharge gradually lessened, and quite ceased in two months, the patient continuing perfectly well, with a free motion of the joint, and can walk many miles without pain or inconvenience.

In two of the cases which I have mentioned, the fluid appeared also below the knee; on the inside of one of them, and on the outside of the other, at the bottom of the *patella*, where I made openings as well as above and found they communicated.

THIS disease has been taken for a dropfy of the joint, in which the fluid is contained under the burfal ligament, but there is a very material difference between these diseases in point of danger, tho' of great apparent affinity; for the access of the air upon opening, soon changes the soft into an acrimoni-ous fluid, productive of dreadful consequences when in the joint. The more manifest fluctuation of this fluid, and it's extending higher up the thigh, when it's residence is between the muscles, are Criteria by which we may distinguish one from the other.

Since the first edition of my Observations, I have received accounts from two Surgeons of the best character relative to this matter. One of them expressly says he has met with two such cases, which he cured by opening, one of which was deemed an incurable white-swelling, by two Surgeons, under whose care the patient had been a considerable time ; and he assured me he had not remarked this species of tumor before I described it.——The other Gentleman informed me that a person was committed to his care, with a large tumor upon his knee, in which case he apprehended the fluid was contained under the *bursal* ligament in the joint, but upon opening it where it was most prominent, just above the knee and beneath, on the outside of the *patella*, he discovered his mistake, as he ingenuously confessed, and cured his patient.

A similar case to the last mentioned, cured in its recent state without opening.

December the 28th, 1758.

D. G. a farmer's servant of N. one of the Persons alluded to in the preceding chapter, who was cured as there directed six Years before, applied to me now concerning a tumor upon his other knee of a similar kind, when it had not been of more than a month's duration; but the other when I first saw it, had been gradually increasing above three years. A Physician of eminence, who had asked me, when another such a Case came under my notice, to give him an opportunity of seeing it, and a Surgeon who had seen the former case, examined this tumour with me the very day he applied to me, and the fluid then appeared to us to have a considerable degree of tenacity, by its sluggish motion under our fingers.

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CONSIDERING its recent State, I was willing to attempt the cure, without opening the tumor; and after bleeding and purging to empty his vessels and bowels, I pursued the following method.

I wrapped the whole joint, and about half-way up the thigh, round with brown paper, several times doubled, moistened in *Spirit. Mindereri* warmed, putting a laced bandage over it, ordering the paper should be constantly wetted as it grew dry, with a sponge dipped into that Liquor, or a Solution of crude *Salt Ammoniac* in vinegar, about half an ounce to a pint, always using it moderately warm. I gave him a drastic mercurial purge every fourth or fifth Day, and now and then an antimonial vomit, kept him to a strong Decoction of *Guaia-cum* with *Sal diuret.* dissolved in it, for his common drink, and, directed a proper attenuating diet, which method agreed, and he bore it very well.

IN about a fortnight there was an apparent alteration in the consistence of the fluid, by its easy undulatory motion, like water in

a bladder, even with the lightest touch of the fingers; the absorption then, evidently began, and the tumor was entirely dispersed in a little more than a month, the fluid gradually decreasing every day.

THE topical remedies caused small vesicles, two or three times, during the cure; but they were soon healed by an epulotic cerate, and the Patient able to bear those applications again.

IN order to recover the elasticity, or tone of the relaxed parts, I advised the cold-bath, and pumping upon the knee a few Minutes every morning; which had a good effect, and recovered the perfect use and strength of his limb, enabling him, in a short time, to walk about from morning till night, as his laborious business required, without any complaint after such exercise: And he still remains perfectly well, not having the least weakness or impediment in the Motion of either knee.

I have cured several bagging tumors upon the knee directly over the *patella*, and at the elbow over the *Olecranon*, unattended with pain, or much hindrance to the motion of the respective joints, by the following embrocation well rubbed in warm twice a day, keeping a comprefs of cloth, or brown paper, moistened with the same constantly upon them, with moderate bandage of a roller, or laced piece which is preferable.

R Aceti acerrimi ℥ss
Sal. ammon. crud. ℥ss
Liniment. volat. ℥ij. m. f.
Solutio.

This application I have also found a very powerful attenuant upon other occasions.

I know not what specific name to give this tumor; but it appears to be a disease of the *membrana cellulosa*, and of an œdematous kind.

In several instances, in an universal *Anasarca* to a great degree, I have seen very extraordinary effects attend the application of the *scarificator* to the legs and thighs, or legs only; repeating the operation, as occasion required, and applying the *scarificator* as often at a time as appeared necessary.—This method I first practised upon the authority of *Mons. Le Dran*. See his *Operations in Surgery*.

I believe a *Scarificator* made with larger and fewer lancets, standing at a greater distance than in the common one, and so contrived as to be raised higher occasionally, would be more applicable to this purpose, as the lancets in that will not, in some cases, penetrate deep enough into the *cellular* membrane.

A true *Schirrhus* upon the thigh
extirpated without Success.

MR. *Donne* of *Dereham*, whom I have already mentioned, desired me to be present, some years ago, at the extirpation of a painful, moveable and exceeding hard tumor, which had been gradually growing about five Years to a large size, situated under the *Musc. rect. crural.* with its fixed point towards the knee between the *Vastus internus* & *externus*.

THE patient was twenty-five years of age and his constitution not remarkably bad. It appeared doubtful to us in consultation what was best to be done in this case; but he wou'd not hear of the loss of his limb, which indeed seemed rather more adviseable than extirpation of the tumor only.

THE tumor was well extirpated, which weighed thirteen ounces, and was evidently glandular; the outside of it was white, smooth and almost as hard as a cartilage,
and

and the inside resembled an hard apple when cut; which appearance denotes an ill character.

THE symptoms after the operation were not at first unfavourable, but the disorder soon appeared of a cancerous nature, as was suspected, and killed the patient; for he would not take the only chance that remained to preserve his life, which was amputating the limb.

Of excrescences, &c. with a cancerous aspect.

MANY years ago, in a young subject, I extirpated a large excrescence of this kind, which filled the orbit of the eye; and I was obliged to remove the whole of the eye with it. The operation succeeded very well, and nothing occurred in it, or afterwards, worth particular notice.

I HAVE since extirpated a smaller from the eye of an elderly Gentleman, in consequence of its being thought advisable in consultation, to remove it by incision; which appeared similar to that in the second case in *Hildanus*. The eye remained easy about three years after, and then another excrescence sprouted from the opposite corner of it; but as the success was now deemed very precarious, he resolved not to submit to another painful operation, contenting himself

self with a gentle palliative method. This disease grew gradually worse, and terminated in a true cancer, affecting the whole globe of the eye before he died.

SEVERAL years ago a woman upwards of seventy, shewed me a large substance upon her head, apparently of this nature, proceeding from what she called a wen, in which state I never saw it. The part upon which it was situated encouraged me to propose the operation, as I cou'd easily take such a circumference into the sound parts as wou'd be most likely to eradicate it effectually. I extended the incision near an inch beyond the basis of the excrescence and left the skull quite bare. The cure of the wound was effected without any difficulty, and the part remained perfectly well as long as she lived, which was about ten years.

Two years ago I was desired by Mr. *Salmon*, a Surgeon of character at *Wickham-Market* in *Suffolk*, to give my opinion concerning a cancerous breast, which had

been

been ulcerated about a year, without making any great progress, and was not much fixed to the subjacent muscle: and also in a large cancerous excrescence upon the cheek of another patient, a gentlewoman advanced in years, which had been superficially removed twice by ligature; but soon sprouted up again, and was now much larger and apparently worse conditioned than ever. My advice in these cases was to extirpate the breast and excrescence, according to the hints given in the chapter of Remarks and Reflections upon cancerous tumors, &c. and both operations succeeded very happily, which were then performed when I was present.

I HAVE been concerned in the amputation of four *Penes*, three of which on account of enormous fungous substances upon the *Glans*, from venereal causes. We met with no difficulty in stopping the *hæmorrhages*; after fixing the skin, by a soft narrow roller turned three or four times round the member, compression was effectually made with the fingers and thumbs of an assistant, whilst the operation was performed by making

ing the double incision ; and two or three vessels in each case were taken up by the needle and ligature. We found no occasion for a *tourniquet* in these operations, nor a *canula* in the cure, both which may have their use in some cases. The patients were put into proper courses and cured without much trouble.

The following letter, relative to cancerous disorders of the eye, was written in answer to one, which I received from a Gentleman of character in the faculty at *Plymouth*.

Dear Sir,

AT the time I received your letter, I happened to be closely engaged in business, or wou'd have answered it directly.

THE patient, concerning whose case you desire more particular information, than appears in my observations, was a girl between sixteen and seventeen years of age, apparently healthy in all respects, except the excrescence upon her eye. When I was first consulted about it, I was informed it had been gradually growing two or three years, from the greater *Canthus* of the eye,

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but

but that it had lately made a swift progress. It now overspread all the external surface of the eye, indeed the whole globe of the eye seemed affected, though it was still pretty easily moveable in its orbit, with our fingers, whence it projected more than an inch : and there appeared no prospect of success, by any other means than removing the whole eye, by the knife, an operation very precarious in its event, in which light I represented it to the persons nearly concerned : however, being earnestly desired by them, and the Surgeon who had long been concerned in the family, I was induced to undertake it. By the constant stricture of the eye-lids, a neck was formed in the excrescence, about which I first tied pieces of narrow tape, crucially, in order to draw the eye upwards, downwards or forwards, occasionally, as I cut, whilst my assistant kept the eye-lids out of the way of the knife. I began the incision at the inferior part, dissecting all away as clean as possible, quite round down to the bottom of the orbit, dividing the *optic* nerve. The *hæmorrhage* was not profuse, and was easily restrained by filling the orbit with soft, dry
lint,

lint, and making moderate pressure upon it with the hand : over the lint was applied a plaster of *Unguent. tripharm.* with easy compress and bandage ; injoining the observance of a strict regimen, and no bad accident happened in consequence of the operation. The lint was suffered to become quite loose before it was removed, the wound digested kindly, and was healed by the common treatment. Afterwards she kept the part constantly covered with a black silk plaster, over a little soft lint or cotton. In order to prevent future appearances of the disease as much as possible, she was put into an alterative course and kept strictly to it a long while ; had a seton drawn into her neck, and when that was worn out, super-scapular *fontanel*s were opened. She lived some years without any fresh appearance of the disorder, and was then carried off by an epidemic fever.

THESE are all the occurrences I can recollect, concerning this case, which, I think, may be worth your notice, and I wish they may answer any good purpose, if you have a patient under such circumstances,

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ces, and find reason to practise the method I have described; but certainly such cases are to be looked upon as very precarious in their event.——Indeed I am afraid we shall never arrive at the necessary degree of knowledge, to enable us to judge with any certainty or precision, what will be the event when we undertake the extirpation of any tumor or excrescence, which has a carcinomatous aspect; therefore we cannot be too cautious in our prognostics, upon such occasions, in defence of our reputation, which stands upon slippery ground; nor be too well advised before we engage in such doubtful and important matters: for nothing can effectually protect us without success, as people in general are too apt to judge and determine from events, without sufficiently considering circumstances, and making allowances for them in favor of the Surgeon: But, to be neither rash nor timorous becomes the character of a Surgeon; and, after having taken the most prudent measures to guard against censure, I wou'd not have him discouraged from acting, even in the most dangerous cases, merely for fear his reputation shou'd suffer, if he shou'd

shou'd not succeed in his attempt.—I am going beyond the limits of a letter, and shall conclude with a short history of a case pertinent to this subject.

ABOUT ten years ago, a very able Surgeon of my acquaintance asked me to give him my opinion concerning a patient of his, near 70 years of age, who had too long neglected such a disease of his eye. It had the appearance of a hard, fleshy substance, was of a dark, red color, and pyriform figure, projecting at least three inches beyond the orbit; and it was extremely painful, attended with such an exquisite sensibility, that the least touch of the finger, upon any part of its surface, was almost intolerable, giving him, at the same time, much pain on the *sinciput*. He kept it covered with a soft *cerate*; it wou'd not bear to be exposed to the air, without immediately causing a great increase of pain, still aggravated when the rays of the sun fell upon it. Under these deplorable and discouraging circumstances, in a case which appeared to us truly cancerous, we cou'd not, by any means, think it advisable to

propose an operation. We advised the most gentle applications, the observance of an exact regimen, with the use of *opiates*, occasionally, to assuage the pain; and a few months closed the miserable scene. We cou'd not obtain leave, after his death, to inspect and examine the tumor itself, and parts adjacent, by opening the skull, &c. as we wished to have had the opportunity of doing. There seemed to us in this case, a great similarity to the first in *Hildanus*; but notwithstanding his great authority and success, we durst not venture to remove the tumor, as it was evidently cancerous, in a man so advanced in years, worn out with pain, &c.

I wish what I have written may give you any satisfaction; and am,

Dear Sir,

Your affectionate Brother,

and faithful Servant,

B. GOOCH.

Of

Of an eye which had a cancerous aspect, proceeding from a blow, happily extirpated.

IN December 1764, Mr. *Donne* of *Norwich*, who I have before mentioned, asked my opinion concerning a person's eye, which had a cancerous appearance, proceeding from a blow, with a man's fist, about three years before; and his case growing daily worse, without having found any relief, by the most proper treatment, it was now in consultation thought advisable, to extirpate the whole eye without delay; which operation was well performed, and succeeded happily. The effusion of blood was profuse, yet puff-ball with moderate pressure restrained it; and the wound was healed without any ill accident supervening. Though a considerable portion of the upper and under eye-lid was taken away in the operation, yet from the great extensibility of the skin and *cellular* membrane in this part, the *cicatrix* was not broader than a straw; and the orbit was so well filled as to leave but a small concavity. The patient
remains

remains perfectly free from complaint, and is able to do the business of a taylor very well with his other eye, which was in some measure affected before the operation; complaining also of acute pain in his head sometimes.

Of *Wens*.

THE *Steatoma*, *Meliceris* and *Atheroma*, are the three kinds of incysted tumors, which our Writers take notice of under the denomination of *Wens*; besides which there is a fourth Species not distinctly remarked by them, appearing to be only an increase of the *Membrana adiposa* itself, growing sometimes to a prodigious magnitude.

MANY years ago I assisted a Gentleman of great eminence in his profession, in taking off a tumor of this sort, which was situated upon a woman's loins, extending from one side to the other, and it hung down upon her hips, resembling a cushion such as porters rest their burdens upon; it weighed about fourteen pounds, and when we carefully examined it, we found it to be entirely fat. I have since extirpated nine myself, but none of them weighed more than a pound; one of them, situated upon the *Trapezius* muscle, had a true glandular scirrhus knot, the size of a nutmeg, in the

the very centre of it. No ill accident happened in the cure of any of them, nor in some others, where I have been concerned with other Surgeons.

THIS kind of tumor admits of extirpation better than those before mentioned, which sometimes are so deeply rooted between the muscles, and situated so near large blood-vessels, as to make the operation tedious and dangerous; but this may be dissected from the common membrane of the subjacent muscles with great ease and safety.

THE softness of this sort of tumor, feeling like fat, with the breadth of its base, distinguish it from the other, but I have seen one in which the substance was harder, and deceived our judgment before the extirpation; though upon examination after, it was found to be only a lump of perfect fat,

AFTER having observed this kind of tumor several times, I accidentally met with it particularly and accurately described, in the *Mem. de l'Acad. Roy. des Sciences*, for the
the

the year 1709, by *Mons. Littre*, a very eminent French Writer, who calls it *Lipome*, according to the following transcript, which I thought wou'd not be unseasonably introduced here from the original.

‘ *Les Medecins tiennent qu’une Loupe peut etre de trois*
 ‘ *especes, selon la matiere dont elle sera formée : Si cette*
 ‘ *matiere ressemble à de la bouillie, la Loupe s’appelle Athe-*
 ‘ *roma : Si elle ressemble à du miel, Meliceri : Si elle res-*
 ‘ *semble à du suif, Steatome. Mons. Littre, veut etabler*
 ‘ *un quatrieme espece, qui s’appellera, Lipome, à cause*
 ‘ *de la graisse qui forme la Loupe. Il en a vû une en effect*
 ‘ *placée sur l’épaule d’un homme depuis 4 à 5 ans, grosse*
 ‘ *comme un pain d’un feu, qui n’étoit qu’un Kiste ou Sac*
 ‘ *membraneux mince, & d’un tissu fort lâche rempli d’une*
 ‘ *graisse molle, et qui avoit toutes les qualitez des graisses*
 ‘ *ordinaires. Quoique la graisse & le suif se ressemblient,*
 ‘ *cette nouvelle espece de Loupe, ou ce Lipome, ne peut pas*
 ‘ *être rapporté au Steatome, parce que la matiere du Stea-*
 ‘ *tome, n’est point inflammable, & ne se fond point, ou du*
 ‘ *moins tres difficilement, & imparfaitement, & c’est tout*
 ‘ *le contraire de celle de Loupe. Quand l’homme qui*
 ‘ *avoit cette Loupe fatiguoit beaucoup, ou faisoit quelque*
 ‘ *exces en vin ou en liqueurs ardentes, sa Loupe s’enflait pour*
 ‘ *quelques jours, apparemment, ou parce que son sang se fer-*
 ‘ *mentoît davantage, et que la graisse du Lipome se fondoit*
 ‘ *en partie & acquiroit un plus grand volume dans un kiste,*
 ‘ *qui lui cedit facilement, ou parce que les vaisseaux de*
 ‘ *la Loupe se dilatoient par le nouveau bouillonnement du*
 ‘ *sang ? (a)*

(a) From some remarks and experiments I have made, I am induced to believe, that the substance which is taken for suet in the *steatomatous*, and also that which is called curds in the *atheromatous* tumor, are only inspissated *Lymph*; but I do intend to make some farther trials, as opportunities offer, to ascertain these

these doubtful points, though indeed even now I am not in doubt myself.

When I was in *London* in the year 1758, Mr. *Tomkyns*, an ingenious Surgeon in *Norfolk-Street*, asked me to see a patient, who had a large tumor upon the inside of his thigh. Upon opening it he took out about a pint of inspissated lymph resembling brains, some of which we put upon the fire, and it soon became hard as horn. How this case ended I know not certainly, but it had a very threatening aspect, and I think it turned cancerous.

A compound fracture, in which the power of Nature was manifested in a very singular manner.

July the 11th, 1739.

J. W. of B. about twelve years of age had both the *Tibia* and *Fibula* fractured by the wheel of a waggon heavily laden, passing obliquely over the limb in a deep rut, from just beneath the knee externally, quite to the extremity of the heel, making the most horrid, large lacerated wound we ever saw, with about nine inches of the *Tibia* projecting.

My very good friend Mr. *Amyas* late of *Norwich*, one of the best Surgeons I ever knew, with whom I had formerly lived, fortunately happened to be at my house at this juncture, to give me his advice and assistance. At first sight we knew not how

to act for the best, in a case so dismally circumstanced ; we deliberated upon it, and at length resolved to saw off a considerable portion of the bone, according to Fig. I. Pl. 16. rather than instantly amputate the limb, considering the drunken condition the boy was in : we then snipped off the loose and tattered teguments, removed some sharp-pointed fragments of the bones, brought the parts into as good a state as we cou'd, dressed in the common manner as lacerated wounds require, and placed the limb in a case of stiff paper well lined with wool, tow, &c. and so contrived as to give as little disturbance to it as possible upon dressing ; using the tailed-bandage.

THE wound soon digested kindly, and the cure was effected by the usual treatment, without any ill accident of consequence supervening ; which favourable circumstances we ascribed to our precaution in removing the fragments and splinters of the bones, &c. at the first dressing.

IN about three weeks I was sensible, as were also several Surgeons, whom curiosity led to see so uncommon a case, that the substance which grew in the space of five inches, entirely void of bone, had acquired in the middle only, a greater degree of solidity than flesh; which circumstance, not agreeing with the general received notion of the generation of *Callus*, we proved beyond dispute, with a sharp-pointed instrument; and we observed that the ossification was gradually formed from that central point, which was considerably advanced before any exfoliation was cast off the ends of the divided bone. In less than four months the whole space was so well supplied with the *Callus*, or rather new bone, that he was able to raise his leg when the bandage was off, without its bending. About a month after he ventured, without my knowledge, to stand upon it, when he thought it had stability enough to bear an equal proportion of the weight of his body: and in little more than half a year after the accident, he walked pretty well, even without the assistance of a stick. The leg is well shaped,
not

not half an inch shorter than the other ; and some years after the cure he told me he cou'd walk forty miles in a day without pain.

IN thirteen compound fractures, I have sawn off a considerable portion of the *Tibia*, and succeeded in both old and young subjects. This experience has given me fair opportunities of observing every days progress in the generation of *Callus* ; and I always found it had the appearance externally of granulations of flesh, changing gradually into bone : concerning which wonderful operation of Nature I shall not attempt an explication, but this, the preceding and following paragraphs are the more worthy of notice, as the preservation of limbs may prove the consequence of their being well considered. (a)

WHEN

(a) See *Boehmer de Callo Ossium contra Du Hamelii Theoriani*.—And *Kerckringius, Vater & Nesbit de Osteogenia*.—Doctor *Hunter*, in his lectures, supports Dr. *Nesbit's* opinion, by curious anatomical preparations, which oppose that of *Kerckringius* and others, who say that bones are cartilages in their original state.

WHEN the external wound happens to be small in a compound fracture, an ample dilatation of it at the very first dressing, is a point which demands particular attention, that any membranous strictures, discoverable by gently introducing the finger, may be set at liberty by knife or scissars; and that coagula of blood, extraneous bodies, loose fragments and splinters of the bone may be extracted before the parts grow tense, inflamed and tender, in order to prevent the train of direful symptoms arising from irritation of the sensible parts; and shou'd much of the whole substance of the bone protrude, sawing off a portion of it may hasten the cure, as well as give an opportunity of keeping the limb in a true direction, in the case described in Pl. 11. either with or without the machine represented in Pl. 12. Fig. 1. by itself, and upon the limb Fig. 2. to keep it steady and gently extended.

By this kind of treatment, and such applications as are generally used in large lacerated wounds, in conjunction with a timely observance of a proper regimen, &c. the formidable accidents, as violent pain, fever, inflammation, &c. may in

a great measure be prevented, as I have good reason to believe, founded upon experience, with such success, as makes me think this method, which I have long pursued, cannot be too much inculcated.

AN accident of this nature is indeed very liable to be attended with a mortification : but this circumstance shou'd not alarm the Surgeon to an hasty determination of the loss of the limb. As soon as there appears any tendency to it, after the use of an antiseptic fomentation, with *Sal ammon. crud.* dissolved in it, dressing the wound with warm digestive twice a day, the whole limb shou'd be wrapt up in a *cataplasme* prepared with barley-meal, bread, *Spec. pro Cataplasmate e Cymino* and the fomenting liquor, or such like ; and then applying bladders about a third part full of hot water to preserve a due degree of heat from dressing to dressing, will be found very beneficial. In such cases also we shou'd by no means omit the *Bark*, when nothing forbids its use, joining *Rhubarb* with it, to prevent the inconvenience attending costiveness ; but this efficacious remedy requires
great

great judgment and circumspection in the administration of it : much certainly may justly be expected from it in mortifications, where there is an evident laxity of the *fibres* or constitution. *Rad. Serpent. Camph.* and volatiles may be joined with it to great advantage in some cases, and *Nitre* in others; but this is the Physician's province.

Of an extraordinary *Emphysema* attending a mortification in consequence of a compound fracture.

MANY years ago I was called to see a boy of eight years of age, who, five days before, had received a fracture upon his leg, with a small wound made by one end of the *Tibia* passing through the skin, which ought to have been enlarged at first, and the end of the bone sawn off. The whole leg and thigh was now become *emphysematous* to a great degree; and this appearance extended even to the lower part of the *Abdomen* on the same side. Incisions were forthwith made in different parts of both leg and thigh, whence air rushed out with an audible hissing noise; and the *cellular* membrane, which contained this rarefied air, was mortified all the way, even where the skin was not so affected. Warm applications were made and other proper measures

measures taken, but to no purpose. The patient died two days after, in which time the *Emphysema* approached almost to the navel. (a)

As the renewal of the bandage, in a compound fracture, is painful to the patient as well as troublesome to the Surgeon, in order to defend it from the matter, that we may not be under the necessity of changing it very frequently, the green waxed cloth commonly called oiled-case, may be placed on the outside of the compresses, which will effectually prevent that inconvenience : and the compresses and tails of the bandage shou'd be moistened at the time of dressing with *S. V. Vin. rub. & Acet.* mixed together, to correct the putrid, offensive smell of the matter, &c. and *Lavender-Water*, or some such fragrant thing, may be sprinkled upon the outside of the bandage, upon the same occasion, as the scent is sometimes not only disagreeable but very pernicious,

T 3

both

(a) The following is a neat and efficacious discutient
Fotus.

R. Aq. puræ ℥iij

Liniment. sapon. ℥iij

Spirit. Mindereri ℥j m.

An ex-
tempo-
neous
Fotus

both to the patient himself and those who attend him. And, as the nature of the case requires the patient's confinement to his bed in one posture, too much care cannot be taken to make it easy under him; and to effect this desirable purpose, when the limb is secured in the manner that has been described, he may be safely lifted up with the sheet, at any time during his decumbiture, by two strong persons on each side, assisting himself at the same time with the rope usually fixed over him, whilst the nurse makes up the bed, laying every thing smooth and even; but all these steps, necessary to the patient's ease and comfort, shou'd be conducted by the care and discretion of the Surgeon.

A very remarkable case in consequence of a simple fracture of the leg, in which strait bandage and other mismanagement caused a mortification, and interrupted nature in the union of the bone.

J. G. of H. aged twenty-five years, of a robust constitution, broke his leg in the depth of winter. Immediately after the accident he sent for a Surgeon, who was much addicted to drinking, and not being at this time in a condition to do his duty, left the limb in a bad position, with a strait bandage upon it, which occasioned a mortification. Another Surgeon was then called in, and the first discarded, under whose care it remained above six months, and probably by his too frequently disturbing the limb, according to the patient's own account, and those who attended him, nature was disappointed in her work.

THIS

THIS Surgeon not being able to continue his attendance, on account of a misfortune happening to himself, the case fell under my care, *June* the 3d, 1740. I found the limb very crooked and ædematous, with a sinuous ulcer and carious bone from the middle of it quite to the ancle, and having opened the *sinus* sufficiently, I discovered the whole substance of the bone about three inches in length, moveable under an arch of *Callus*, as described in Pl. 16. Fig. 3. a. a. a. grown as hard as bone : and I saw no possibility of extracting this piece of dead bone, without cutting away the arch of *Callus*, which was effected, after laying it bare, with a small carving gouge, and an oblique edged turner's chizel and mallet. After having extracted this piece of bone, nature filled up the space with a boney substance, and in about six months the limb became so useful, that the patient walked upon it ; which afterwards was so strong that he cou'd carry heavy burdens as he used to do, without any inconvenience.

A SURGEON of my acquaintance, of unquestionable abilities and of an ingenuous mind, told me he had assisted in an amputation in a similar case to this, and frankly confessed, that upon examining the limb after it was taken off, it appeared to him it might have been saved by this method.

Some rules necessary to be observed
in the treatment of simple fractures.

AFTER reduction in the gentlest manner, and placing the limb in the easiest position, repeated bleeding, as the patient's strength and constitution will allow, keeping him to a cooling, diluting regimen, and his body open by the mildest purgatives, are things of the utmost consequence to be attended to, in order to prevent pain, tension, inflammation, &c. more especially if he be of a sanguine or plethoric habit, accustomed to live freely. By these means the parts will sooner be brought into a condition to bear moderate pressure in order to limit the growth of the *Callus*, upon which greatly depends making a slightly limb; for when the *Callus* is suffered to become luxuriant, it will prove difficult, and perhaps be out of the Surgeon's power to subdue it, to the patient's and his own satisfaction.

Principiis

Principiis obsta is an excellent precept in Surgery.

A *cataplasma* prepared with oat-meal, oil and vinegar is one of the best applications at first; but in the country the patient frequently lives at such a distance from the Surgeon, that he cannot attend to apply and renew it so often as is requisite. *Unguent. tripharm.* or *Cerat. alb.* alone or mixed together, will be found a good substitute, spread upon a piece of the tailed bandage, by which means, and embrocating the limb once a day with warm oil and vinegar, the intention of the *cataplasma* will generally be well answered, and without giving any disturbance to the limb.—— Applications, bandages, &c. must be varied according to the age and constitution of the patient, season of the year and other circumstances, all which will be duly considered by the judicious and attentive Surgeon.

THE bandage with eighteen tails, tho' that precise number is not to be invariably kept to, I think, is unexceptionable in simple

ple as well as in compound fractures ; it is much more commodious than the roller, as it admits of viewing the limb and making the necessary applications without disturbing it, which is a matter of no small consideration. The tails of this bandage, if of a proper length, may be drawn tight enough over the compresses, to answer any purpose in the cure, as I have found by long and much experience : but in the conclusion, when the leg frequently proves *œdematous*, the laced-socking is the most eligible bandage, as it makes a more equal pressure than can possibly be done by any other, to assist nature in recovering the tone or elasticity of the animal *fibres*. In such a state of the limb good friction with a flesh-brush and a warm embrocation are advisable ; the same means will also be found beneficial, in restoring the plumpness of the calf which is apt to shrink and grow flabby during the cure of the fracture.

MANY years ago I contrived the fracture-case for the leg, as shewn in Pl. II. both separately and upon the limb, which I have found very useful in compound as well as in simple

simple fractures, and the same kind of case is also applicable to either thigh or arm. It has longitudinally all the stiffness of a deal board of the same thickness, and transversely all the flexibility of paper used upon such occasions, which by use, and the moisture that it will contract, soon loses its proper degree of stiffness requiring a renewal. It is made of clean deal $\frac{1}{8}$ of an inch thick, with leather glued to it, and cut through to the leather, leaving the space of $\frac{1}{6}$ of an inch, with a very fine saw such as the joiners use, or a knife set to a certain gage, according to the thickness of the wood ; I scarce know which manner of cutting to give the preference to, having made them both ways myself ; but the saw-kerf allows of most flexibility.

SEVERAL skilful and experienced Surgeons have tried this case upon my recommendation, and have assured me, that they find it answers the purpose better than any contrivance they have used or seen. It is portable in the pocket, and may be used very well by only resting the limb in it upon a pillow, but, I think, to more advantage
and

and security between junks, especially for the thigh ; and a box will be found more commodious for the leg. It must be covered with wool, tow or soft cloths, or, what is far preferable, cotton-wool used in quilting ; and the limb must be equalised with such materials, to make the bearing regular and easy ; using pieces of stiff paper occasionally, where compression is wanted to keep the bones together, giving as little pain as possible. The vacuity or space between the calf and the heel requires to be particularly attended to, and uniformly filled up, to prevent a deformity of the limb by the sinking of the bone, and pain of the heel by the weight resting too much upon that point.

THIS case perhaps wou'd be of considerable use in the Camp, to transport patients with fractures from one place to another, with the greater ease and safety ; or in the Navy to prevent their being so much affected with any extraordinary motion of the ship. It has been made use of by some of my brethren in great business, as well as myself, in removing patients many miles in
compound

compound and other fractures ; and they have informed me of the same advantages that I have observed, the patient's complaining very little of pain upon the motion of the carriage, when carefully conducted : and several Surgeons of my acquaintance have provided themselves with various sizes for leg, thigh and arm. When the wound attending a fracture happens to be underneath the limb, part of the case may be cut away, in order to come at and dress it with ease to the patient, as the Surgeon will very readily apprehend.

SOMETIMES great inconveniences arise from the obliquity of simple fractures upon the leg, as well as upon the thigh, which the machine already mentioned for the compound fracture may obviate. Whenever it may be thought proper to use that and this case together, which is intended when applied alone to pass above and below the knee and ankle-joints, it must be shortened so as to leave room below the knee and above the ankle, to affix the machine to the limb, as is described in Pl. 12. Fig. 2.

THE gentle extension and steadiness the limb will be kept in by these means, will greatly contribute to the prevention of pain upon any unavoidable motions, or startings in sleep which frequently happen, as well as preserve the natural length and figure of it; and, by the assistance and support of it, the patient may, with ease and safety, be removed from one part of the bed to another as often as occasion requires.

WHEN there is a good coaptation made of the fractured bone, and maintained by gentle extension, the lateral pressure of the case will have a proper effect, without which, in this kind of fracture, the ends of the bone must inevitably overshoot each other; and under such circumstance the case alone cannot fully answer the design.

IT is scarce possible, that a fractured limb shou'd be kept sufficiently steady, unless whatever is made use of for that purpose, passes over the joint above and below the fracture, which this machine does, as well as the case when used alone, and gives at the same time an opportunity of removing them

to prevent their growing stiff, without disturbing the fractured bone; which are circumstances that shou'd by no means be over-looked in the management of fractures.

AFTER the case is well lined, with such materials as have been mentioned, according to the directions already given, the tailed bandage shou'd be laid over that lining, having the upper piece spread with *Unguent. tripharm.* or *Cerat. alb.* to receive the fractured limb, before reduction, that it may not be liable to disturbance immediately after: upon which it shou'd be gently extended in a true direction, that as little pain as possible may be excited; increasing the extension gradually to the necessary degree. Thus the bone will often be reduced without much uneasiness to the patient; but when the extension is hastily made with great force, the violence of the pain sometimes throw the muscles into such spasmodic contractions, as more than counteract any extending power the hand can exert, to bring the bone into a reducible state. When it is found necessary to use the machine

U chine

chine with the case, that shou'd also be placed under the limb at first, for the same reason.

PLASTER-COMPRESSES, with pieces of very thin sheet-lead, such as tea is brought home in, placed in the middle, appear to me preferable to any other, in order to prevent an exuberance of *Callus* : and when a limb happens to be distorted, if the *Callus* will yield, by applying one of these compresses of a considerable thickness to the protuberant part, and two to the other side of the limb, leaving a due space directly opposite to the protuberance, it may, by the use of the machine to extend it, and by the force of the turnikit-ligatures upon the fracture-case, be gradually reduced to a good figure, without causing an immoderate degree of pain, as I have experienced in some instances ; and in others I have succeeded without the use of the extending machine, first making extension by hand, and then rectifying the deformity as much as I possibly cou'd, before putting on the case, to be acted upon by the ligatures,

with

with the compresses placed as have been directed.

THE same kind of compresses will also be found of signal service in a fracture of a rib or *clavicle*, the latter of which require nice management to prevent deformity ; the cavities above and below the *clavicle* as far as the *Acromion Scapulæ*, shou'd be gradually filled up with them, and other compresses considerably above the level, with pieces of stiff paper over them, that sufficient pressure may be made upon the fractured part, by the roller artfully turned, so as to keep the fractured bone gently extended. Without these precautions the *Callus* will frequently prove luxuriant to an unseemly degree, giving great offence, particularly to Ladies.

How to keep a fractured thigh duly extended, particularly in adults, has exercised the thoughts of some of the ablest Surgeons ; and it is indeed a point of great importance to be well effected.

SEVERAL years ago I had a machine made for this purpose, according to a sketch

I drew of it some time before, and soon met with a fair opportunity of trying its usefulness. It answered my design the first time I used it, beyond my expectation, in a very bad oblique fracture, attended with a vexatious cough, which occasioned extreme pain by shaking the limb, and deprived the patient of rest; it kept the part, sensibly to himself, in a gentle extension, and the limb in a steady posture, so that it was not the least affected by the cough afterwards, which before, according to his own expression, gave him such a sensation of pain, as if the ends of the broken bone had been thrusting into the flesh. This machine being lined with soft oiled leather, and well stuffed with wool, sat very easy upon the part, without causing excoriation. Pieces of buff-leather will defend the limb against the machine, as well as the other lining and stuffing, as has been sufficiently tried; but very particular care is required to guard the inside of the thigh next the body.

THIS machine is very simple in its construction, and intended to maintain its power

er upon the limb, in any position necessary to put that or the body in ; and I hope the repeated trials of other Surgeons will farther confirm its utility, even in a fracture upon the neck of the bone. In Pl. 12. Fig. 3. it is shewn by itself, and in Fig. 4. upon the thigh with the fracture-case, both which leave good room to open and dress the limb, without removing any more than the upper part of the case confined with the ligatures, by virtue of the turnikits, which are of excellent use in straitening or loosening the ligatures, without running any hazard of giving disturbance to the limb.

MR. *Pierce of Bath*, whose character out of his profession is equal to his eminence in it, has laid me under the greatest obligations. His tender care of me there, in a heavy affliction many years ago, and his continued friendship ever since, I can never forget. In consequence of inspecting a case in which I had been consulted, this Gentleman communicated to me by letter two instances, where the neck of the *Os Femoris* was fractured, without the patient's falling to the ground, the head of the bone

being twisted off as he expreffes it, by a jerk or fudden action of the mufcles only.——

One of them was the late Duke of *Portland*; upon his flipping his fervant caught him before he came to the ground, and his Surgeon, from the manner by which the accident happened, pronounced it only a ftrain; but nine months after, when he fought relief at *Bath*, Mr. *Pierce* found the limb wanted four inches of its natural length, having a very exuberant *Callus* about the joint.——The other patient was a Merchant at *Bristol* aged 75, in whose cafe two Surgeons diffented from Mr. *Pierce*, being led into their miftake by the circumftance I have mentioned; but the patient dying foon after, the Surgeons behaved with candour, had the limb opened, wrote Mr. *Pierce* a letter confirming his opinion, and confeffing their miftake, in a very ingenuous and laudable manner.

Every perfon who exercifes his ingenuity and judgment for the benefit of mankind deferves commendation; and it affords me pleasure to obferve the regard that is paid to the treatment of fractures, it being one of the moft important branches in Surgery, and it is the more neceffary to be well confidered and underftood, as fuch accidents very frequently happen, requiring the nicelt and moft attentive management to make well fhaped and ufeful limbs.——I wifh Mr. *Wathen's* invention,

vention, published since these sheets were sent to the press, may be found, upon due trial, to answer the intentions better than mine, which I have used more than twenty years, much to my satisfaction ; and which also has been used and approved by many of my ingenious Brethren ; making alterations and improvements as they saw occasion.—I cannot find that Mons. *Petit* ever invented any machine for these very purposes ; but upon this subject may be read Mons. *La Faye's* *Mem.* in vol. 2. and Mons. *Belloy's* in vol. 3. of the *Mem. de l' Acad. Roy. de Chirurgie*.—Their machines are indeed very complex, though simplicity of construction is a great excellence, and shou'd be studied as much as possible.

P L A T E I I .

Fig. 1. The inferior piece, for a limb of common size, requires to be 22 inches long; from the hollow of the ham to that at the heel 13 inches, and about nine broad at the calf.

2. The superior piece shou'd be about a foot long, and half as broad at the top.

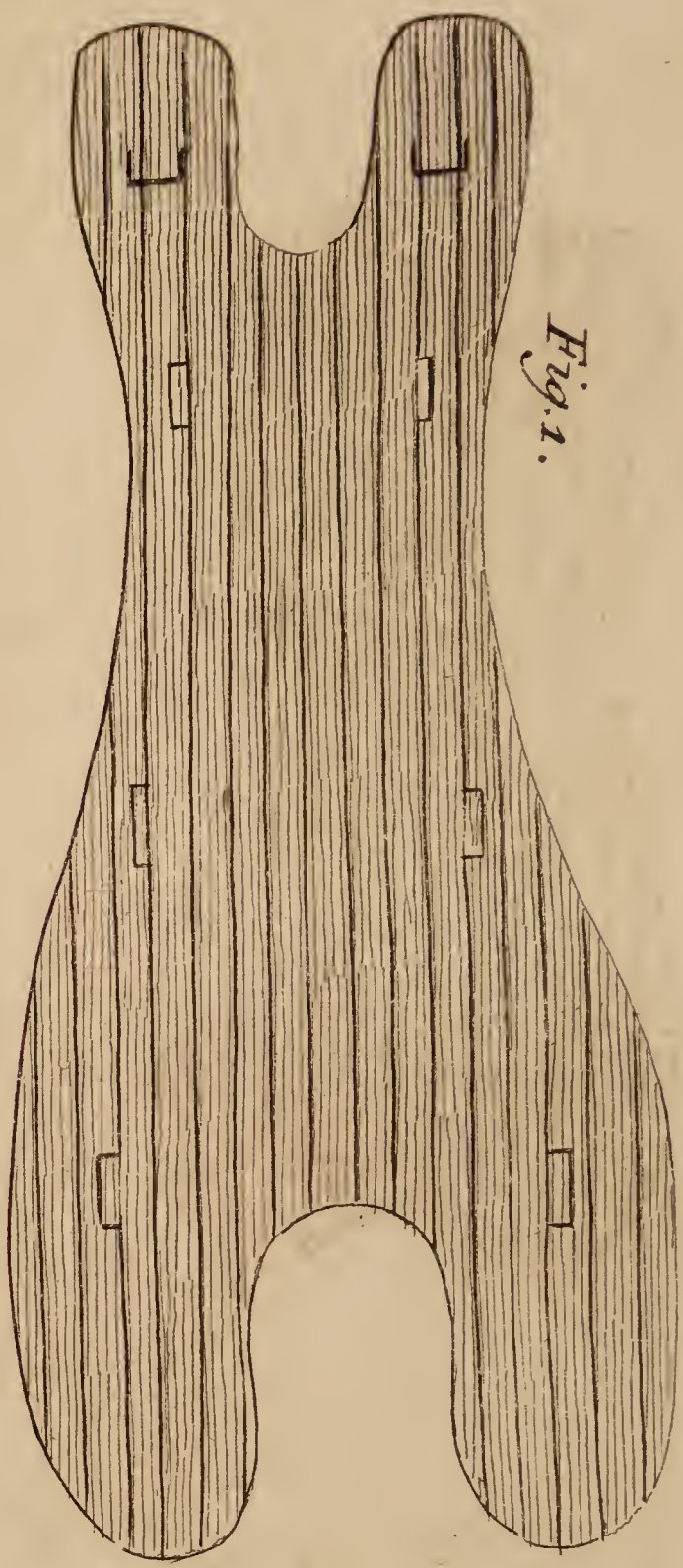
3. The sole piece may be 10 or 12 inches long, broad at the top $4\frac{1}{2}$, at the bottom $3\frac{1}{2}$.

4. The turnikits and wire passing thro' them, used in straitening the circular ligatures. The turnikits shou'd be about two inches and a half long, resembling a peruke-maker's pipes.

5. The several pieces which compose the case shewn upon the limb.

Leather straps and buckles may be used to support the sole-piece instead of fillets. The loops for the fillets to pass through are best made with large brass wire.

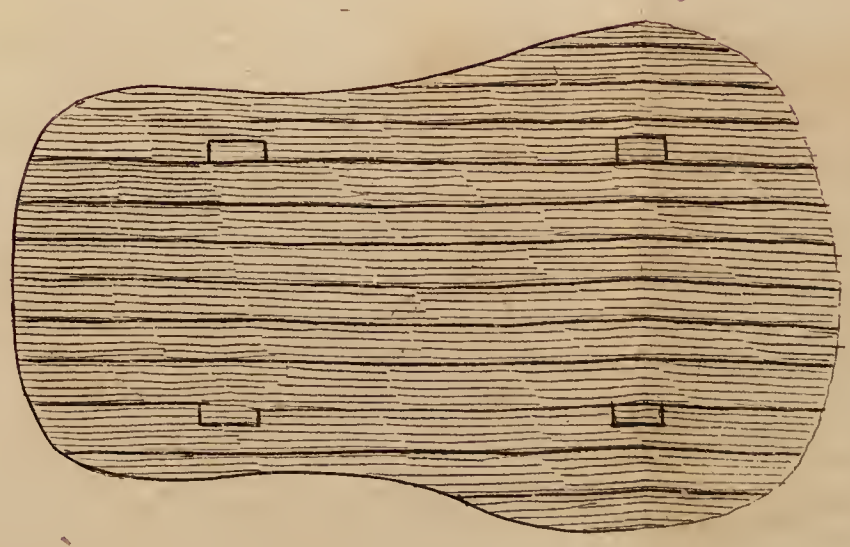
Fig. 1.



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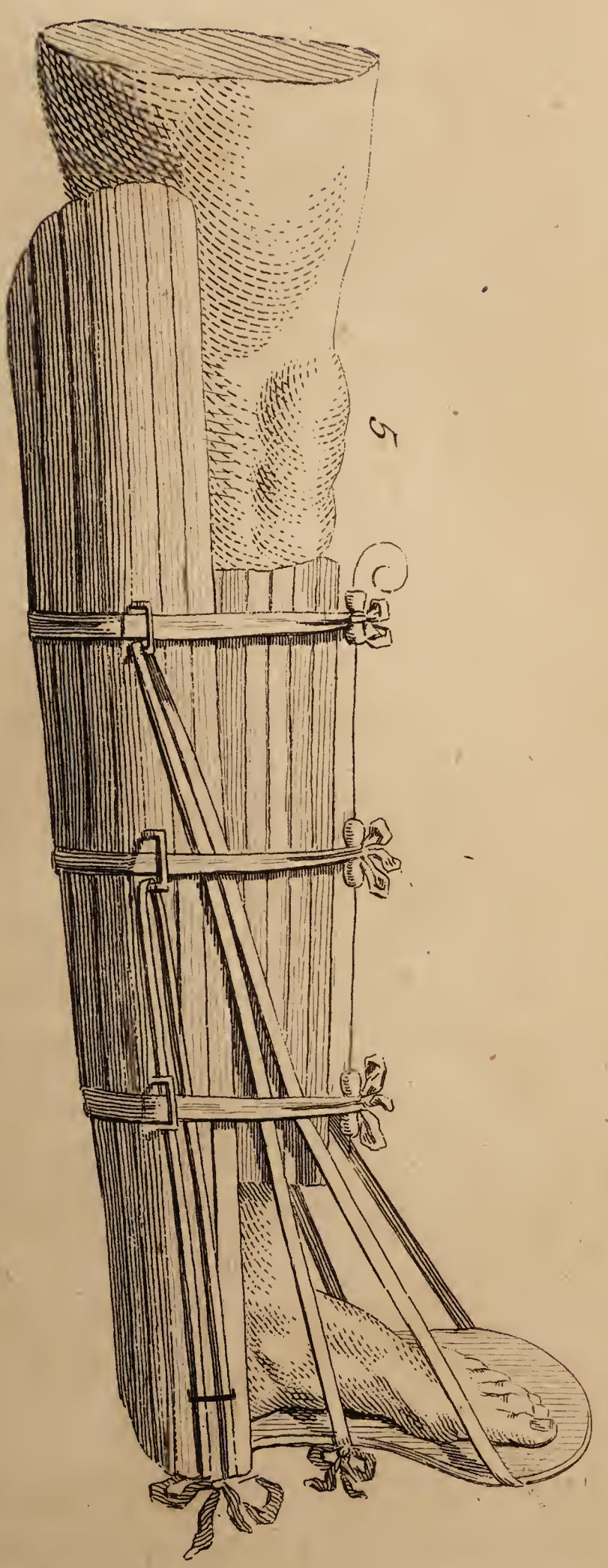
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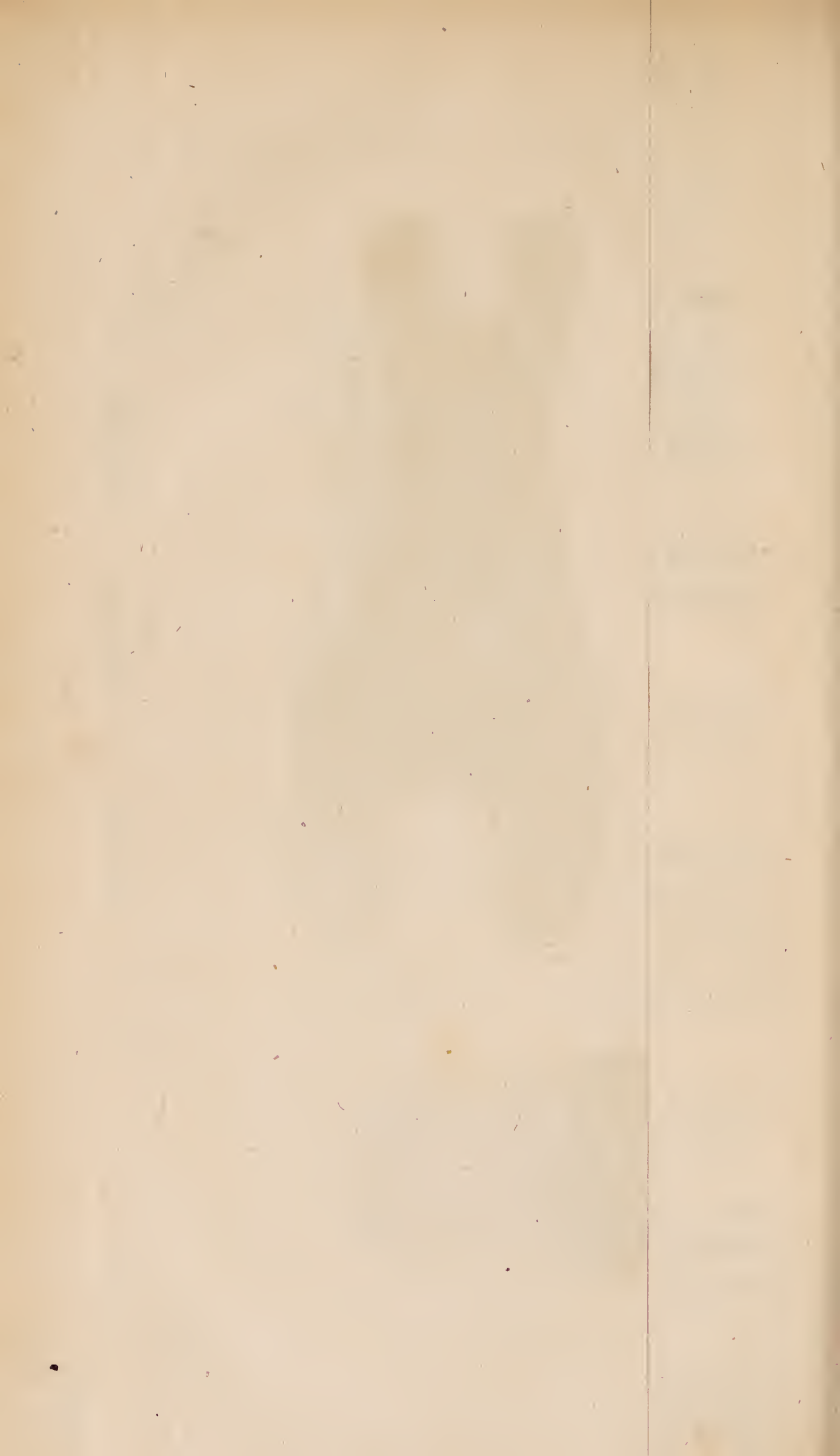


4



5





P L A T E I 2.

Fig. 1. The transom, to which the sole is secured, is made to be opened and fixed by a pin; and the machine may occasionally be made wider, as appears by other holes in the transom, about which, on each side of the sole, fillets are to be tied, coming from a dimitty piece quilted for ease laced round the heel and instep, to make the extension upon the working of the screws; but I believe buff-leather may prove easier to the part than the dimitty quilted.

2. Shews the machine and case together upon the limb.
3. The longitudinal parts of the machine for the thigh are designed to move upon the circular plates, by which means it may be accommodated to limbs of a different size; and as there is a pin at each end of the circular plates, if the limb happens to be larger than ordinary, straps of leather may be added.
4. Shews the machine with the case upon the thigh.
5. The key to work the screws. There shou'd be two such keys, that the machine may occasionally be wrought on both sides at the same time.

MR.

Fig. 3.

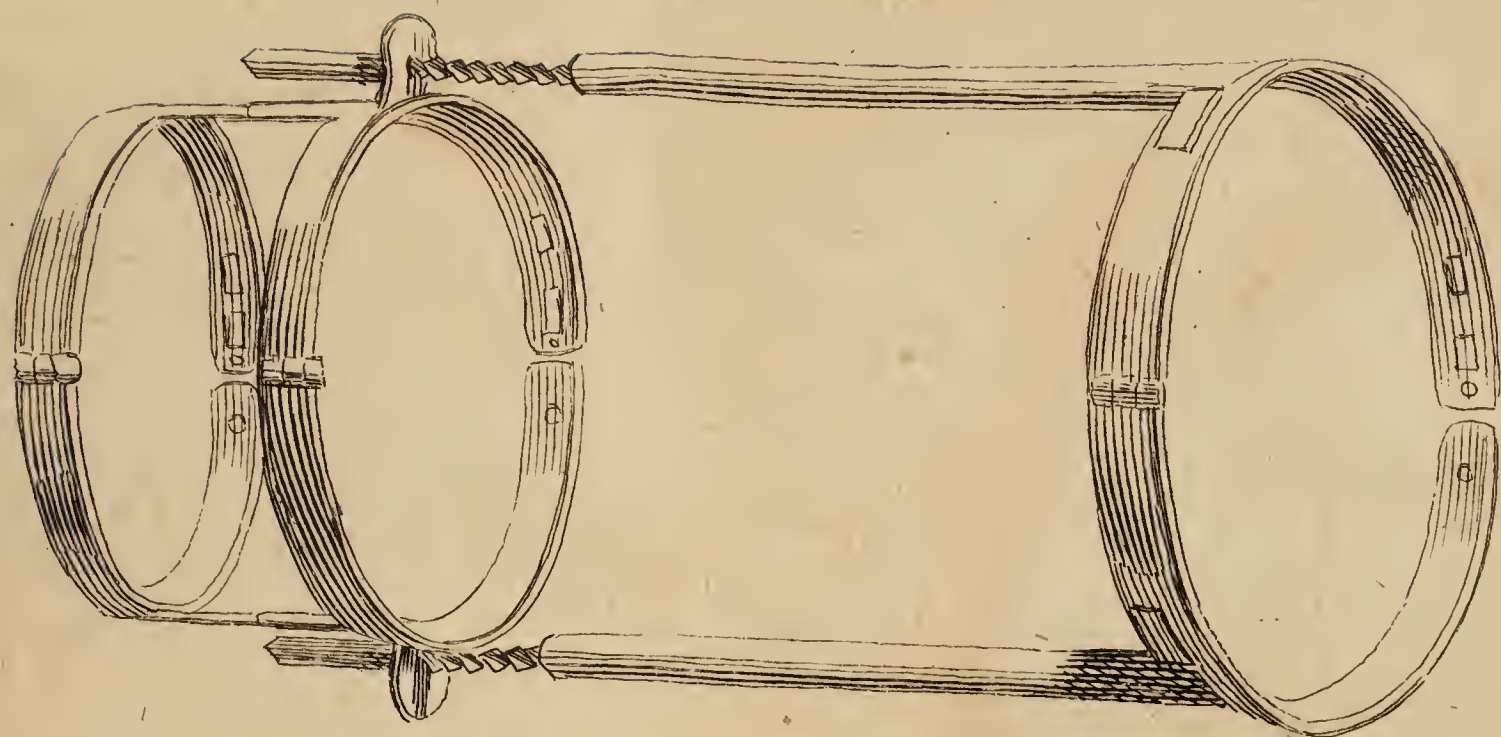


Fig. 1.

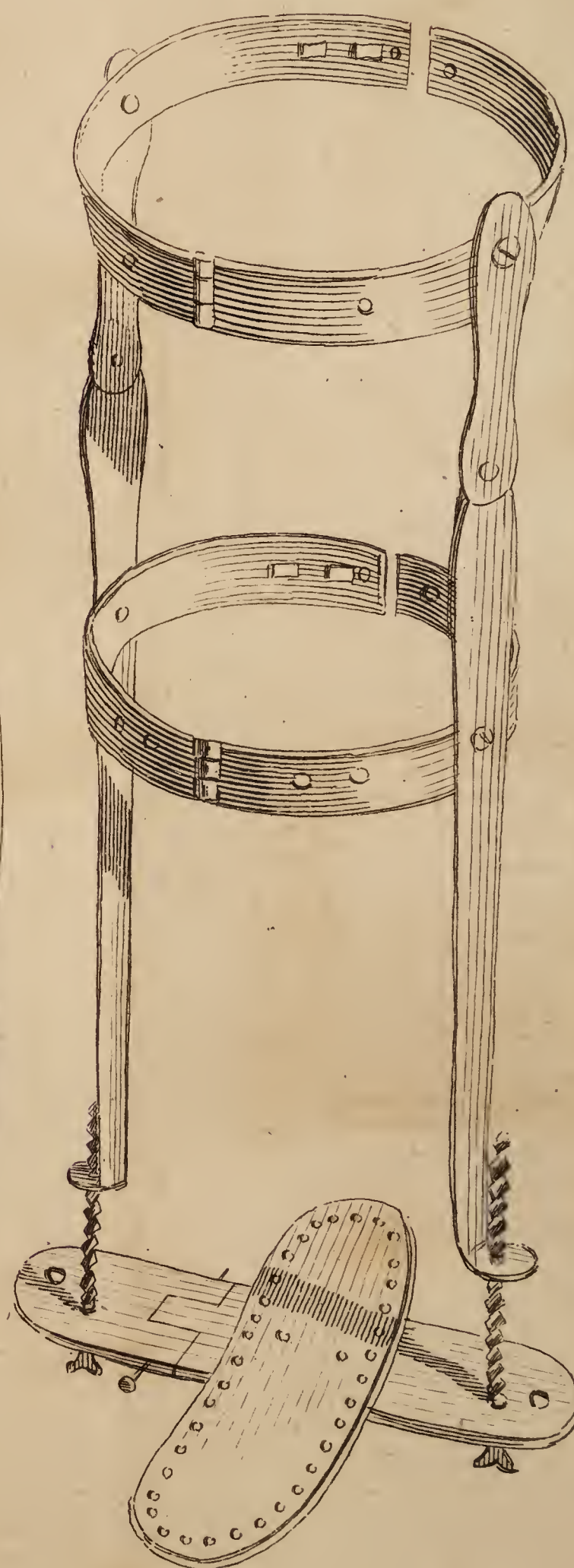


Fig. 2.

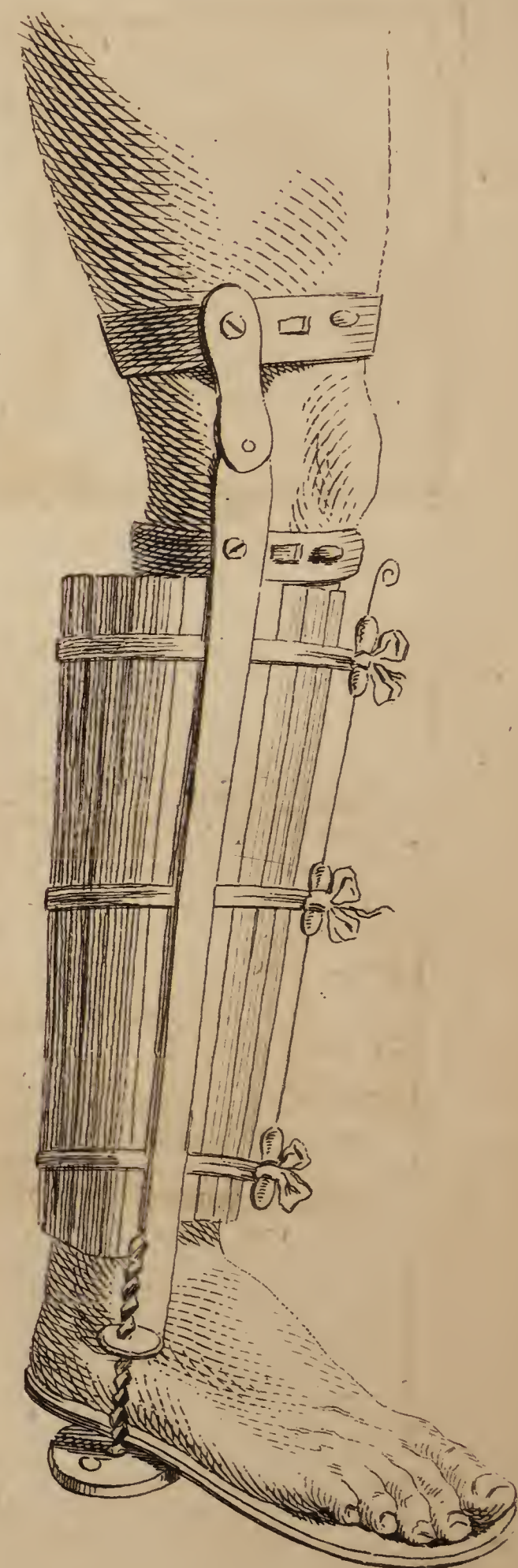


Fig. 4.

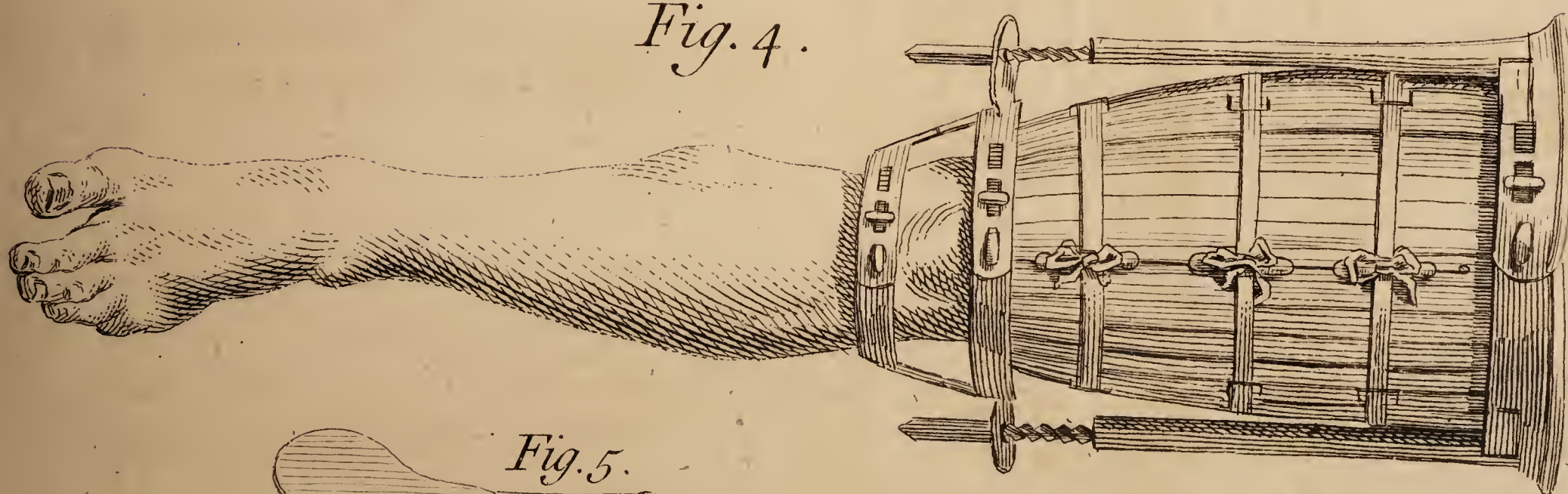
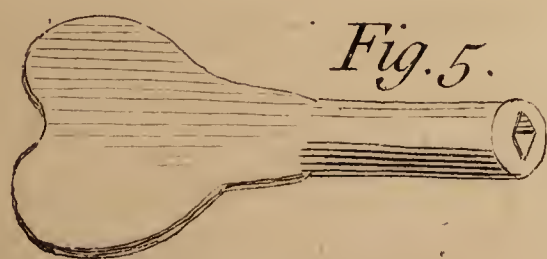


Fig. 5.



MR. *Layman* of *North-Walsbam* in *Norfolk*, an excellent Surgeon with whom I am well acquainted, has constructed a fracture-box to keep either leg or thigh in a due degree of extension, upon the best principles I have seen, to serve that important purpose. As my illness prevented an engraving of it being published here, as was designed with his approbation, I hope he will communicate it to the world, in a manner to have it more generally known. (a)

(a) The principles upon which this box is constructed are as simple as possible. It has a moveable bottom running in a groove by virtue of a screw at the foot to make the extension, when the foot is fixed to the foot-board, with a bandage as described in the explanation of Pl. 12. Fig. I. and the leg below the knee to standards — In order to extend the thigh, the power is continued by the same means, having a band fixed above the knee and to the foot-board; thus the extension will be made from both thigh and leg; and so combined the respective parts may be eased: by these bandages and a belt passing on the inside of the thigh, well adapted and properly fixed, the limb may be effectually extended; but words alone cannot convey clear and comprehensive ideas upon this occasion. — Mr. *Layman* has assured me he has found this box answer his expectation for both leg and thigh; taking particular care to make the belt sit easy by defending the parts.

Of weak and distorted limbs.

THE general rules to be observed in the management of them are, supporting the weak parts, opposing the inclination of the bones and counter-acting the bending force, without creating pain or interrupting the circulation of the blood. Certainly it is not less necessary, that the parts of our fabric, connected in a wonderful manner, shou'd have a just and regular bearing one upon another for strength and support, than those of any piece of architecture.

A MACHINE of the kind shewn in Pl. 13. Fig. 1. I have by experience found very useful, in curing and relieving various disorders of the knee and ankle-joints, when other methods had not succeeded.

WHEN there is great weakness in these joints, and they are apt to incline inwards or outwards in children or adults, the common bandages cannot resist the inclination of the bones ; and if applied very strait with a view of giving support to the
relaxed

relaxed parts, they may so far interrupt the circulation of the blood as to cause an atrophy of the limb, which I have seen more than once from such mismanagement.

IF a weakened limb be kept in its true direction, nature alone will frequently restore its proper tone or elasticity; but if it falls into an ill position, till that be rectified, little relief can reasonably be expected from the most efficacious applications.

A FEW years ago I was consulted about a Gentleman's son, who had long been lame in his ankle-joint, and treated with the common applications and bandages, under which he grew daily worse. I found the ligaments much relaxed, and the *Tibia* by degrees had lost its perpendicular direction and bearing, projecting a great way over the *Astragalus*; by which means the limb became extremely weak, and the point of the *Tibia* bore hard against the external part of the ankle, causing almost intolerable pain every step he made.

IN this case I directed a moveable easy pad shou'd be added to the machine, to
bear

bear against the protuberant part of the bone, which, by virtue of a screw, acted upon it gradually, just as it could be born and was found necessary: by turning the screw a little every day, the limb was soon reduced to its natural position without exciting pain of any consequence; and in a few months he walked very well, without the assistance of the machine or a stick.

SOMETIMES I have directed it to be made double, in order to pass both on the inside and outside of the limb, for the greater support and security.

IN this manner I had it made for the relief of an excessive corpulent Gentleman, who had eight months before received an accident, which proved disputable, by the Surgeons concerned, whether it was only a violent extension of the tendons, or a fracture of the *Fibula* joined with it: however the limb remained weak, the joint was much distorted, and, when he bore but little upon it, the external ankle almost touched the ground, depriving him of the power of walking, and giving him much pain. He was soon enabled to walk by
the

the assistance of the machine, which he wore some months and then cou'd walk many miles without it, and without pain.

SOME years before, I so far relieved a Gentleman's wife, by this means, as to enable her to walk, though by external injuries, done to both knees, she had been quite lame for a long while. In this case the plates that bore against her knees on each side, were broader than ordinary and concave, lined with leather and stuffed very soft with wool. She is now able to walk without any assistance. (a)

IN the year 1735 I had a machine of this sort made for a Gentleman's daughter, to receive the hip, in order to take the weight as much as possible off the knee, which was become extremely weak, painful and useless, from an extension received many years before; and it was now deemed an incurable case. She soon found relief

(a) In this case the machines were made as light as possible, having instead of whole plates to bear against the knees, only a rim of steel about an inch broad. And upon many occasions I have ordered knee-pieces to be made in the same light manner, that have proved very beneficial in weak and loose joints, wherein common knee-pieces were of little or no use.

lief by keeping the joint steady, and removing the burden from that weak and painful part, which gave nature an opportunity to recover the strength of it; she wore it about two years, and then laid it aside for one less cumbersome, that did not go up to the hip; this she also wore a few years, and has been able to walk very well without ever since.

AFTER fractures of the leg, the machine as shewn upon the limb may prove a great security, especially when the patient will not be long enough confined; but exposes himself to accidents, before the *Cal-lus* is perfectly ossified, by which means the good direction the Surgeon leaves the limb in, is sometimes altered to his discredit.

THE good effects we have seen from thus supporting weak and distorted limbs, in a variety of instances, shew the usefulness of mechanics in Surgery as well as in other sciences.

Explanation

Mr. *Page* the watch-maker at *Norwich*, has a good head and a good hand; I have very often employed him upon these occasions much to my satisfaction.

Explanation of PLATE 13.

- a. a. a. The steel bows, made thin and very elastic, must stand clear of the edges of the *Tibia*, pass about half round the limb, and be fixed with straps of leather hung unto pins.
- b. b. b. The longitudinal plate, to be made of tough stuff, as the workmen term it, and as light as possible with sufficient strength.
- c. The shank to pass into the socket, in that part of the machine which is to be fixed into the heel of the shoe or laced-boot, and confined there by a screw at the bottom.
- d. The screw to keep the shank in the socket.

FIG. 2.

Represents the machine used in the cure of the total division of the tendon of my horse's leg hereafter to be mentioned.

Miscellaneous

Fig. 2.

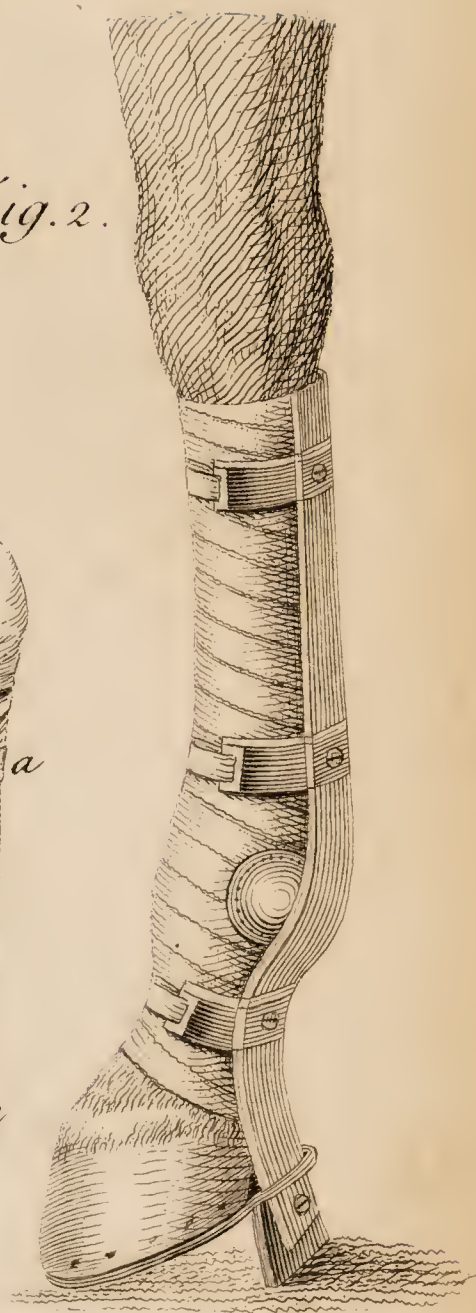


Fig. 1.

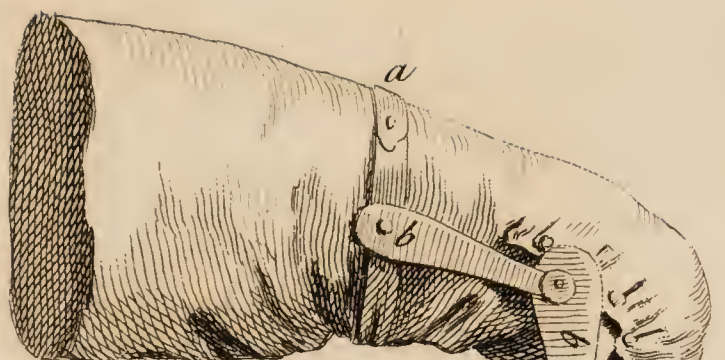
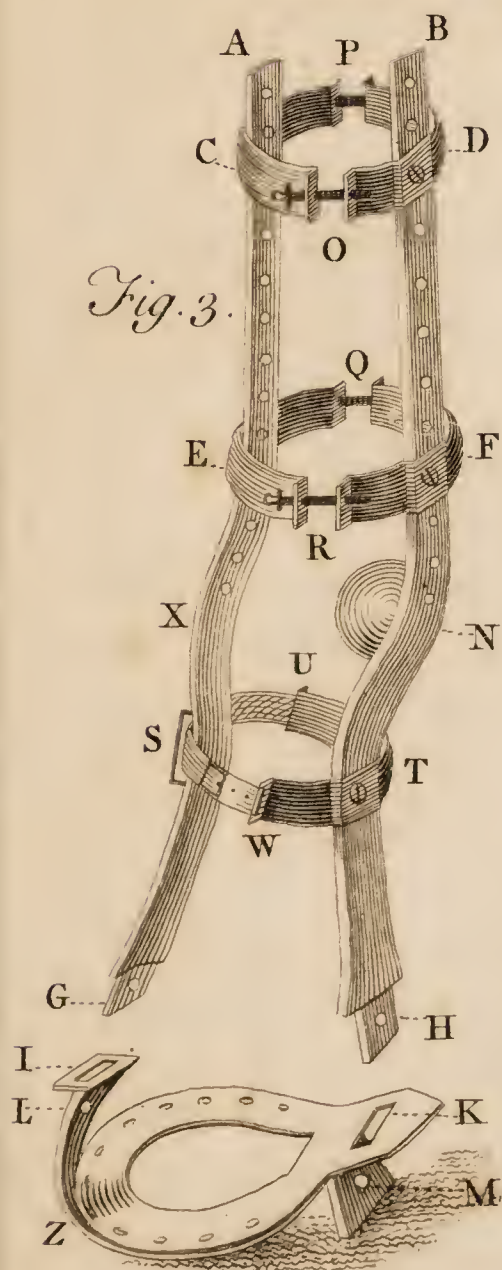
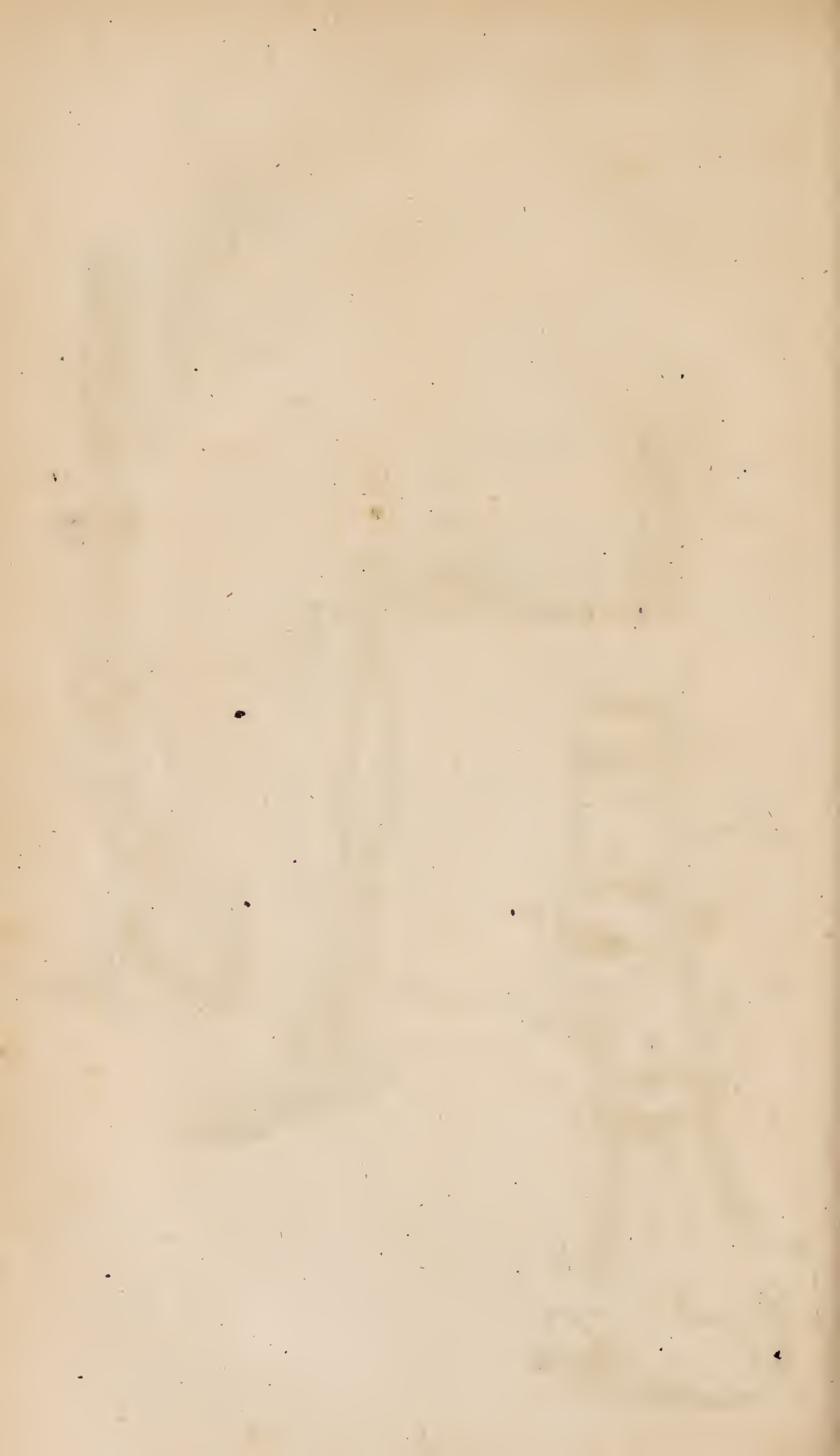


Fig. 3.





Miscellaneous remarks upon luxations.

COMPOUND luxations are of a more dangerous nature than compound fractures, for very plain reasons; but if a Surgeon shou'd judge it advisable to attempt saving a limb under such threatening circumstances, I am inclined to think, from what I have observed, he will be more likely to succeed, by sawing off the head of the bone, especially if it has been long quite out and exposed to the air.

MANY years ago my old acquaintance and ingenious friend Mr. *Cooper* late of *Bungay*, was called to assist in an amputation, on account of an extraordinary accident of this nature at the ankle joint, in a subject advanced in years; but instead of consenting to the intended operation, he sawed off both the head of the *Tibia* and *Fibula* as represented in Pl. 16. Fig. 2.

by which means he preserved the limb, making it so useful, that the poor man walked and wrought for his bread many years after ; of which success I am a witness : But cases of this kind may happen, calling upon the Surgeon to join the greatest prudence to his skill in his profession ; for after his utmost endeavours in a tedious cure, the limb may not prove so useful as a wooden leg.

THE able Surgeon I have just mentioned told me, he had succeeded to his wish in a young subject, by sawing off the head of the *Radius*, which passed through, and made a dismal laceration of the tendons at the wrist ; and that the patient found little or no defect in the strength or motion of the joint.——We constantly corresponded, and reciprocally exchanged our notions without reserve as long as he lived ; and he told me it was in consequence of our conversation upon this subject that he tried this practice.——I was since called to a young woman, who had the second bone of the right thumb forced through, in such a manner, that it cou'd not be kept

kept in its place till I sawed off the head ; in consequence of which step, this dreadful lacerated wound healed speedily and kindly, without the least ill accident supervening ; and nature, by little and little, formed a new joint, with such a degree of motion as enabled her to use her needle again, and perform every kind of business with it as well as before, to my great astonishment, as well as some other Surgeons.

MR. *Freke's* Commander, with a very little alteration, appears to me the best machine which I have seen, for the reduction of an old and obstinate luxation of the *Humerus*, as the limb can be moved in all directions during the extension, and have the situation of the head of the bone examined at the same time. I have succeeded by it in cases of many months standing, that wou'd not yield to other methods ; but great care is required in the use of it, particularly to keep it in a true perpendicular direction against the patient's side, which may be very easily done by fixing it steadfastly with screws to the floor, the

base of it being enlarged, and to the side with a girdle round the body.

IN recent cases I have always been so happy as to succeed by hand, which is better than any machine when powerful enough ; and in general violent force is not required. The method I have usually followed, is placing the patient in a sitting posture upon the floor, for steadiness sake, securing his body in a good attitude, with a band properly padded against his ribs under the arm, hung unto a hook screwed into a door post : and having by these means obtained one fixed point, we have less to attend to in the reduction. This circumstance is of no small consideration ; for when the extension and counter-extension are performed by the assistants placed in the common manner, it is scarce possible for the Surgeon to make them exert their force steadily and regularly enough to keep the arm at a right angle with the body ; which is generally necessary, till he directs the depression, or other direction of it.

THAT

THAT kind of luxation of the *Humerus*, where the head of the bone slips beyond the *coracoid* process under the *pectoral* muscle, and rests upon a rib, may baffle the attempts of the ablest Surgeons, as I have seen, both by hand and machines, from the opposition which that process makes to the return of it. An examination of the Skeleton will elucidate this matter, and evidently shew the best position to put the arm into, in making the extension to facilitate the return of the head of the bone. It is also possible that when the *bursal* ligament is upon the full stretch, it may suffer a laceration by a violent force from the head of the bone, and then collapse about its neck, in such a manner as to render reduction impracticable; or the intervention of some lacerated muscular substance may prove as great an obstacle. (a)

(a) See what Mr. *Thompson* and Mr. *White* have said upon this subject, in the *London Medical Observations and Inquiries*; from whence I have received information, that proved very useful to me in three instances, since the first edition of my observations.

AFTER reduction, and observing the general rules directed in fractures, to prevent or remove the common accidents attending them, it shou'd always be remembered to give the joint gentle motions occasionally, as soon as it will bear moving without causing pain, in order to prevent stiffness from an accumulation and spiffitude of the *Synovia*, and to recover the action and power of the muscles, wherever the luxation happens to be ; but more especially at the elbow joint. The same precaution shou'd be observed when a fracture happens near a joint, that the spreading of the *Callus* may not occasion an incurable immobility of it ; but in this case more care is required in moving the joint, lest the union of the bone shou'd be interrupted.

When a greater force than ordinary is required, in the reduction of an arm or thigh, the pullies in Doctor *Desaguliers's* Experimental Philosophy, Pl. 10. Fig. 7. are applicable so as to exert their full power upon the bone itself, by which one person will be

equal

equal to many, even supposing their force by hand cou'd be united commodiously for that purpose. There seems to be no objection against their use, as they can be affixed to the part without injury, and have their power easily regulated.——*Sculdetus* in his *Armament. chirurg.* has something like them, which he took from *Vitruvius*.——See Mr. *Travis's* account with remarks upon a luxation of the thigh bone, in the *London medical Observations and Inquiries*.

Remarks upon Amputation.

THOUGH the preservation of limbs undoubtedly gives the highest pleasure and reputation to Surgeons, and is the object they ought always to have in view; yet, when amputation is found absolutely necessary to save life, there are some circumstances worthy our greatest attention, for the ease and benefit of the patient.

SURGEONS have long complained of the great inconveniences attending a want of flesh, to cover the end of the bone in amputation above the knee, by which the cure is much retarded; and the stump being left in a conical form when cured, is more liable to external injuries ever after.

IN order to prevent these inconveniences many methods have been proposed and tried, which have not fully answered the end. In Pl. 14. is the figure of a retractor made of firm, strong leather, which I
invented

invented and first used in 1739, and am convinced by repeated trials, it will effectually answer the purpose. The length of it for a limb of a common size shou'd be 14 inches, the breadth in the middle about five, and the diameter of the central hole a little more than one ; the lines direct the division of it.

AFTER making the double circular incision, with the utmost exactness, in the usual manner, the operator may use either of the short knives in the same plate, or a common incision knife, to divide the muscles quite round, about two inches up close to the *periosteum*, and then put on the retractor, adapting the hole of it well round the bone upon the *periosteum*, desiring an assistant to draw up the muscles equally and regularly with it, as far as shall be thought necessary : after which the bone is to be sawn as near the retractor as possible, without paying any regard to the *periosteum*, which will prove no impediment to the motion of the saw, and the more the bone is denudated of this membrane, the more liable it will be to exfoliate ;

liate; but if the Surgeon choofes to scrape the *periosteum* off the bone before he faws it, he will have a fairer opportunity of doing fo when the mufcles are thus retracted. The reticlor has a farther ufe; for by inclofing the flefh it defends it from the faw, and makes a more decent appearance in the eyes of the fpectators; and this is a matter of fome confequence.

By thefe means as much flefh may be faved as the Surgeon judges proper; I have found an inch and a half or two inches fufficient, which I always made an allowance for, as far as I cou'd in the circular incifion; but in fome cafes, where there is a great flaccidity of the mufcles, it may be requifite to leave more. When the mufcles, &c. are brought down equally and cover the end of the bone, ftrips of common plaster applied at due diftances, paffing through flits at the end of the ftump over the ufual drefling, and reflected four or five inches up the thigh, will prove powerful enough to keep them in that fituation, and be eafy to the patient. Thus a ftronger preffure may be made at the end
of.

of the stump, if required, than can be done by the roller; but when a strong pressure is not there required, the strips of common plaster only decussating at the end of the stump, forming the figure of an asterisk, without passing through slits, will be found sufficient.

I HAVE practised this method in the presence of several of my ingenious brethren, and recommended it to others, which has met with their approbation; and, after trying it themselves, they have assured me that it fully answers the intention. Since I followed this method, I have cured many stumps without any projection, visible exfoliation of the bone, or the cicatrice being near so broad as usual. In the last amputation I performed upon the thigh, there was a necessity of doing it much higher up than ordinary, yet, though it was a large limb, the cicatrice was but a few lines broader than the diameter of the end of the bone, left concealed in a shallow cavity, and the stump was speedily healed without any exfoliation. (a) THE

(a) Many years ago my son Doctor *D'Urban* was at *Paris*, and had some conversation upon this subject with

THE passing the needle very deep, and including a great circumference of flesh, &c. within the ligatures, in taking up the arteries, creates unnecessary pain, without so effectually answering the main end and purpose ; for they will soon cut through the soft flesh, and may not then sufficiently compress the vessels to prevent future bleeding : besides, they often lay the foundation of *sinuses* troublesome to cure, and cause other inconveniences ; therefore all possible care shou'd be observed in passing the needle, which may be more certainly done without inclosing too much of any substance, when the mouth of the vessel can be discovered without loosening the tourniquet-ligature. Those well acquainted with the course of the arteries, after the blood

is

with a Surgeon of great character there, whose pupil he was, and he approved the method At the famous University of *Edinburgh*, where he afterwards studied physic, and took a Doctor's Degree much to his honour, he mentioned this method of amputation to a Surgeon of the Royal Infirmary, who practised it upon his authority, and assured him it answered the design entirely to his satisfaction.—I have observed that the more firm and muscular the parts are where the operation is performed, the less liable they are to retract from the bone in the cure, consequently under this circumstance less of them is requisite to be saved by the use of the retractor.

is well spunged up, will be able to discern and secure most of them necessary to be regarded, without being shewn them in that manner ; but when it is required to loosen the tourniquet-ligature, it shou'd be done very slowly and cautiously, that the blood may not flow with impetuosity to obstruct the operator's view ; the least bubbling appearance of it at the mouth of the vessel will be direction enough to an operator that is not precipitate. (a)

As pain is a dreadful symptom indeed, and productive of much mischief even after an operation is perfectly well performed, the utmost attention is required to prevent or remove it ; and for this consideration strait circular bandage shou'd be avoided, to which, from the interruption of the circulation of the blood, may justly be ascribed
not

(a) In several operations wherein I have been concerned, in the last seven years, I have used and recommended a pair of small dissecting *forceps*, to take hold of the edge of the artery and draw it out a little way, to be then held by an assistant, in order to give a fair opportunity of passing the needle without taking in any more cellular membrane than to prevent the ligature from slipping off at the end of the vessel. By this means any substance may be avoided, which being included might prove prejudicial.

not only pain, but many of the most threatening consequential symptoms. A very little reflection will sufficiently convince us of the absurdity of this practice, and that instead of preventing, it tends directly to increase the *hæmorrhage*, as has been demonstrated by Professor *Monro*, one of the greatest men of the age.

SOFT lint evenly applied, a plaster or pledget spread with *Unguent. tripharm. Cerrat alb.* or something of this nature, confined with strips of common plaster as has been directed, and a knitted woollen cap, will be found dressing and bandage sufficient, in whatever limb amputation is performed ; which readily yielding to the distention of the vessels, upon the increased power and velocity of the blood, will allow a more free and uninterrupted reflux ; consequently less pain, fever and inflammation will ensue, and a quicker digestion of the wound, without so much offensive gleet, as I have observed. Hence we may reasonably infer, that the patient's life will be less exposed to danger, if strait bandage be omitted in amputation : and as this method of dressing after the operation

ration is the most simple and expeditious, as well as the easiest and safest, it may more particularly merit the consideration of Gentlemen of the Faculty employed in the Army and Navy.

Some useful Remarks.

IN order to make the circular incision with the more exactness, the use of a leather instead of a common fillet is advisable, to those not conversant in amputation, and it shou'd be spread with common plaster to make it fix the better upon the part; one or two thicknesses of which rise enough above the superficies of the skin to be an unerring direction to the knife, even in a hand not quite steady; and there is another advantage in the use of it, as it keeps the muscles more firmly together to resist the knife, which are frequently very flabby, where this operation is requisite. A second fillet, applied about $\frac{3}{4}$ of an inch

X from

from the first, may sometimes be found necessary to the same purpose; for, in the cure of the stump, much depends upon an exact and regular section of the skin, membrana adiposa and the muscles; and I am inclined to think that this part of the operation may be better performed with a strait than a curved knife; indeed the instrument-makers now give it but very little curvature, as well as make it much smaller and lighter, and better accommodated to every purpose.

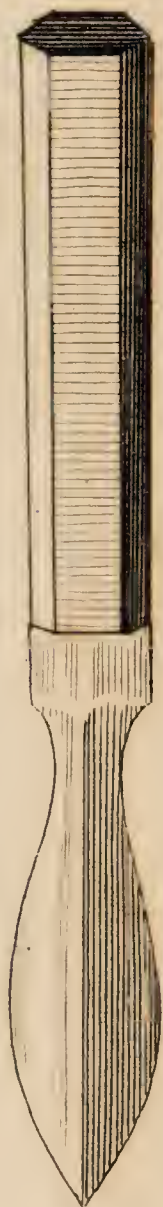
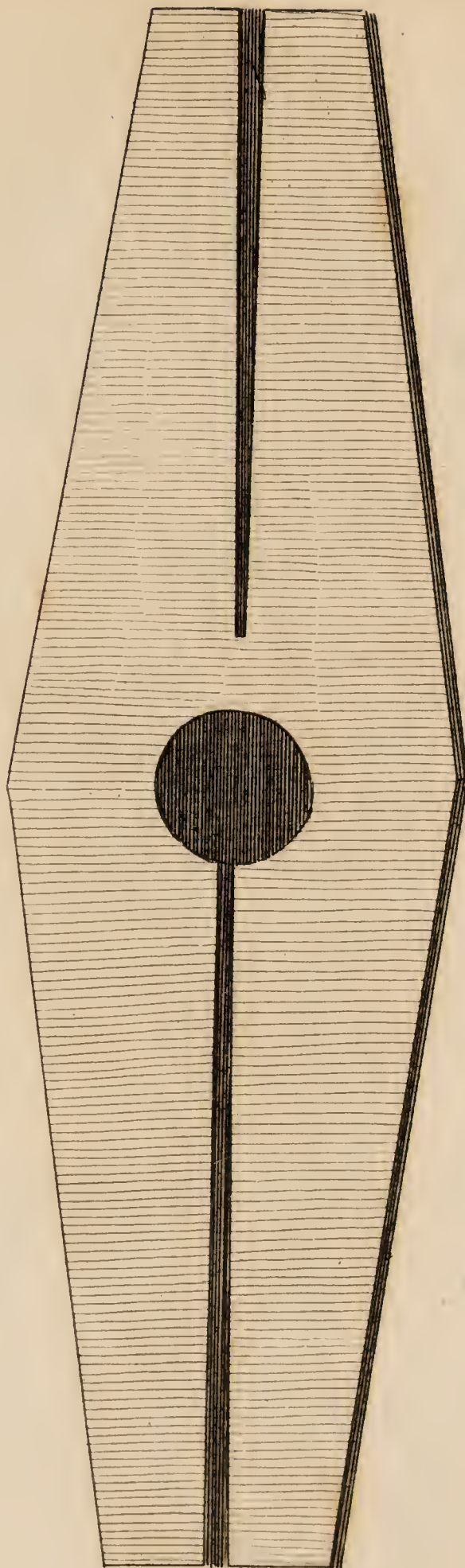
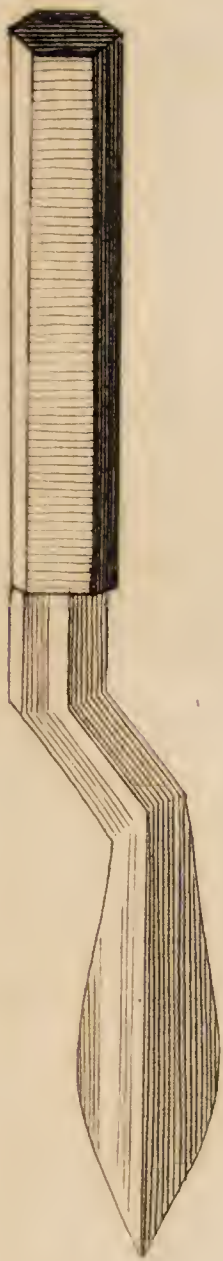
WHEN we use the common tourniquet and ligature, I think it may not be amiss, from an accident which happened in an operation wherein I was concerned, to affix two ligatures to the compress, one of which to be rolled up and pinned back upon it, to be in readiness shou'd the other happen to break. I give this precaution, having been present when such an alarming circumstance happened in the operation, just when the *crural* artery was divided, which threw the operator into some confusion, but I soon made my handkerchief serve

serve the purpose of another ligature. This accident which made an impression upon the minds of the spectators to our disadvantage, was owing to the inadvertence of the person employed to manage the tourniquet, in twisting the ligature too much ; therefore, to obviate such an inconvenience, particular care is required in tying the ligature, so that very little more than one turn of the stick may straiten it sufficiently. This incident made me more attentive than ordinary ever after.——

Mr. *Freke's* machine, which I have used many years, is a very good one, and prevents the danger of breaking the ligature, as it rolls round a cylinder, and has many other advantages ; but instead of the small wooden compress as he directed, to be placed over the artery, I always used one rather soft than hard, and of greater dimensions, for reasons that appeared to me very obvious.——Since his, another has been invented, I believe, by Mr. *Crane*, one of the worthy Surgeons of St. *Bartolomew's* Hospital, which is evidently preferable, and now in more general use ; it

is formed upon Mons. *Petit's* plan, improved by the ligature running upon four cylinders, by which construction, it moves through four times the space at one revolution of the screw, and in that respect consists its excellence.

1. 6. 14.



Of a compound fracture and an amputation in consequence of it, attended with very remarkable circumstances.

December 12th, 1756.

MR. *Layman* of *Diss*, a man of genius and great abilities in his profession, desired me to join in consultation with him and some other Surgeons, in the case of a man aged about thirty-five, of an indifferent habit of body, who received the day before a compound fracture upon his leg, by a waggon going over it.

WE found a piece of the whole substance of the *Tibia*, and another of the *Fibula* between four and five inches long, exactly corresponding with each other in length, loose in the wound, and the muscles, &c. contused and lacerated in a very uncommon manner.

AFTER

AFTER strictly examining the case, we were unanimously of opinion, that amputation without delay was most advisable, and it was accordingly performed, in which some circumstances occurred, that we were not aware of. We thought we had indisputably determined for the best, in agreeing to take off the limb below the knee, from what we observed externally, and by the examination we made with our fingers in the wound; but in the operation, the flesh between the bones was found so soft, that it would not resist the knife, and the *Fibula* was so loose at its junction with the *Tibia*, that it cou'd not be sawn without great difficulty, though the persons who held the limb, took particular care to keep it steady, both above and below: we also found it extremely difficult to take up the artery, inclosed in this soft flesh, which would not well bear the ligature, and probably from that condition of the flesh, the vessel had liberty to retract farther than it cou'd otherwise have done; but in this case could the mouth of the vessel have

been

been discovered, the use of the dissecting *forceps* as recommended in the last chapter, might have proved the means of preventing the future dangerous *hæmorrhage*.

By the looseness of the remainder of the *Fibula*, and the fleshy substance between that and the *Tibia* having suffered so much, we were of opinion, that the bones were broken by the first wheel, and the second coming upon that part of the *Fibula*, nipped the intermediate substance between it and the *Tibia*, as in a vice.

EVERY thing promised success till the seventh day after the operation, when a violent effusion of blood proceeded from the vessel that was enveloped in the soft contused flesh, whilst Mr. *Layman* was dressing the stump. The use of the needle and ligature was now judged impracticable, from the loss of substance between the bones, and retraction of the vessel; nor could Mr. *Layman*, after having checked the *hæmorrhage* with the tourniquet, make the artery bleed again, though he let the ligature quite

loose

loose and waited a considerable time for that purpose ; he then applied a piece of *Agaric* of the *Oak* as nearly as he could guess over the mouth of the vessel, with good compression,

AFTER having proceeded thus far, he dispatched a messenger for me, that we might consider together how to guard against this impending danger. Two days after, we were again alarmed with an *hæmorrhage* from the same vessel, which proved so violent as to bring the patient's life into imminent danger, though a person was appointed to attend constantly and use the tourniquet occasionally, but he was not vigilant in his post.

As the needle and ligature were now become entirely useless, and the *Agaric* had proved ineffectual, we had recourse to a vitriol button, after having stopped the course of the blood with the tourniquet, keeping the ligature strait till we thought the *eschar* was formed ; and in the dressing we applied lint and little pieces of stiff paper,

per, with small compresses of cloth, so as to rise sufficiently above the surface of the stump, that the compressive force might be increased, as occasion should require, particularly and directly over the vessel without affecting the stump in general. Having done thus, we gave him an opiate, and employed a person to make a constant pressure with his hand at the end of the stump over a circular piece of stiff paper, but not to such a degree as to cause much pain.——We recollected Mons. *Petit's* expedient to compress the artery in the *inguen*, in the case of the Marquis of *Rotbeline*, whose life was reduced to the utmost danger, by an effusion of blood 21 days after having had his thigh amputated higher up than ordinary ; and then speedily contrived in our exigence, a machine as described in Pl. 15, to act more equably than the hand, making the fixt points upon the shoulders, by the bands passing over them.—From what I can remember of the history of the Marquis's case, not having the authority before me, he received a shot in his thigh in an engagement, and that the wound

wound cou'd not be healed ; but, a *caries* ensuing, after 20 years, amputation of the limb became necessary : after which, on examination of the thigh, the key of his bureau was found rusty, lying contiguous to the bone. (a)

WE agreed upon dressing again three days after, and then to apply buff-leather, answerable to the extent of the *eschar*, moistened with ardent spirits in order to prolong the fall of the *eschar*. This we thought was the best substance to resist the impetus of the blood at the mouth of the artery ; and it was used after the separation of the *eschar*, till nature supplied a strong, and a better covering of flesh.

THE

(a) The relation of this extraordinary case is inserted at large in the *Mem. de l'Acad. Roy. des Sciences* for the year 1731, and epitomised in the Elogy upon that celebrated Surgeon, in the second vol. of the *Mem. de l'Acad. Roy. de Chirurgie*.—After this *Monf. Petit* wrote a dissertation concerning *coagula* of blood in the arteries as proving the means of stopping the *hæmorrhage* after amputation, and took great pains to propagate and establish that notion, which his own patient's case, as well as this of ours, seems to overthrow.

THE tourniquet was constantly used during the time of dressing, and continued till the machine was again well adjusted, which the patient said always made his stump easier by a moderate degree of pressure at the end; and the reason of that effect is obvious enough. We used *Freke's* tourniquet, and that the frequent application of it might not effect the thigh, the place was often changed, and well defended against the ligature.

AFTER this we had no farther trouble from the bleeding, the stump healed kindly, and the patient recovered as good health as before the accident. We do attribute the preservation of his life, in a great measure, to the use of this machine. For a stump of a common size the external plate may be about five inches in diameter, the internal four; they may be made circular, or a little elliptical, or of such a figure as the Surgeon thinks fit.

Among the rest of our chirurgical conversation at this meeting, mention was made of an accident, in which one of the arteries between the *Tibia* and *Fibula*

bula was opened about the middle of the leg, and the bleeding stopped from time to time by various methods; but at last it was thought advisable to amputate the limb.

Upon reflection it occurred to me, that in this case the removal of two or three inches of the *Fibula* was practicable; and that probably it might have given a fair opportunity of coming at the bleeding vessel, and proved the means of preserving the limb.

Explanation of P L A T E 14.

Fig. 1. Shewn upon the part in Fig. 2.

a. a. Circular ligatures to pin the bands to, intended to pass over the shoulders, in order to keep them parallel; and they should also be pinned to a waist-band for the same purpose.

b. The tourniquet and ligature.

c. c. The fillets, passing through the upper and lower slits, to keep the machine steady and in a true direction when pinned to the bandage.

If the machine be used above the knee, it may be better to have the bands pass on the anterior and posterior parts of the thigh than on the sides, to prevent obliquity in their direction. How far this little inconvenience might be prevented, by passing in that manner, when the machine is wanted below the knee, I have not yet experienced.

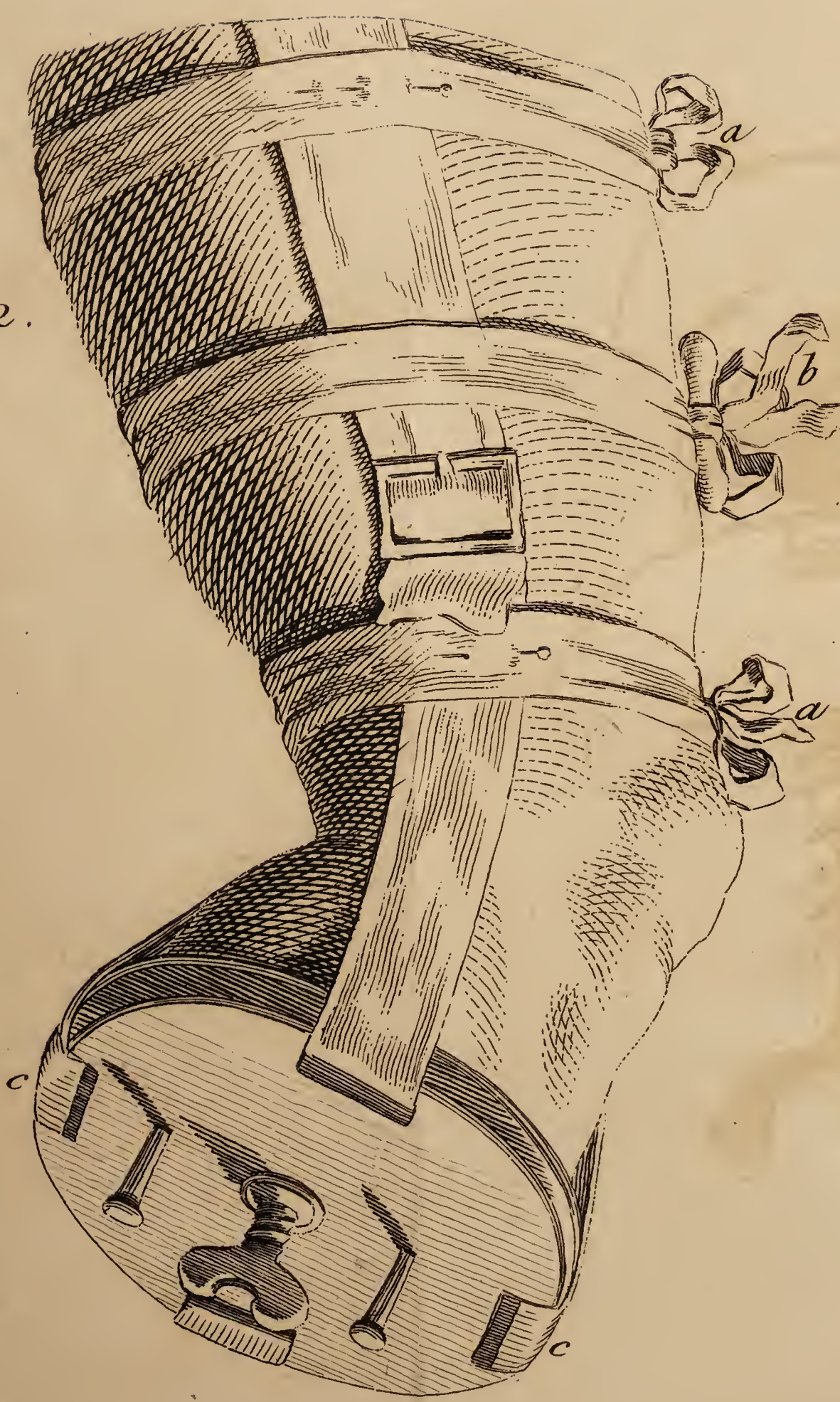
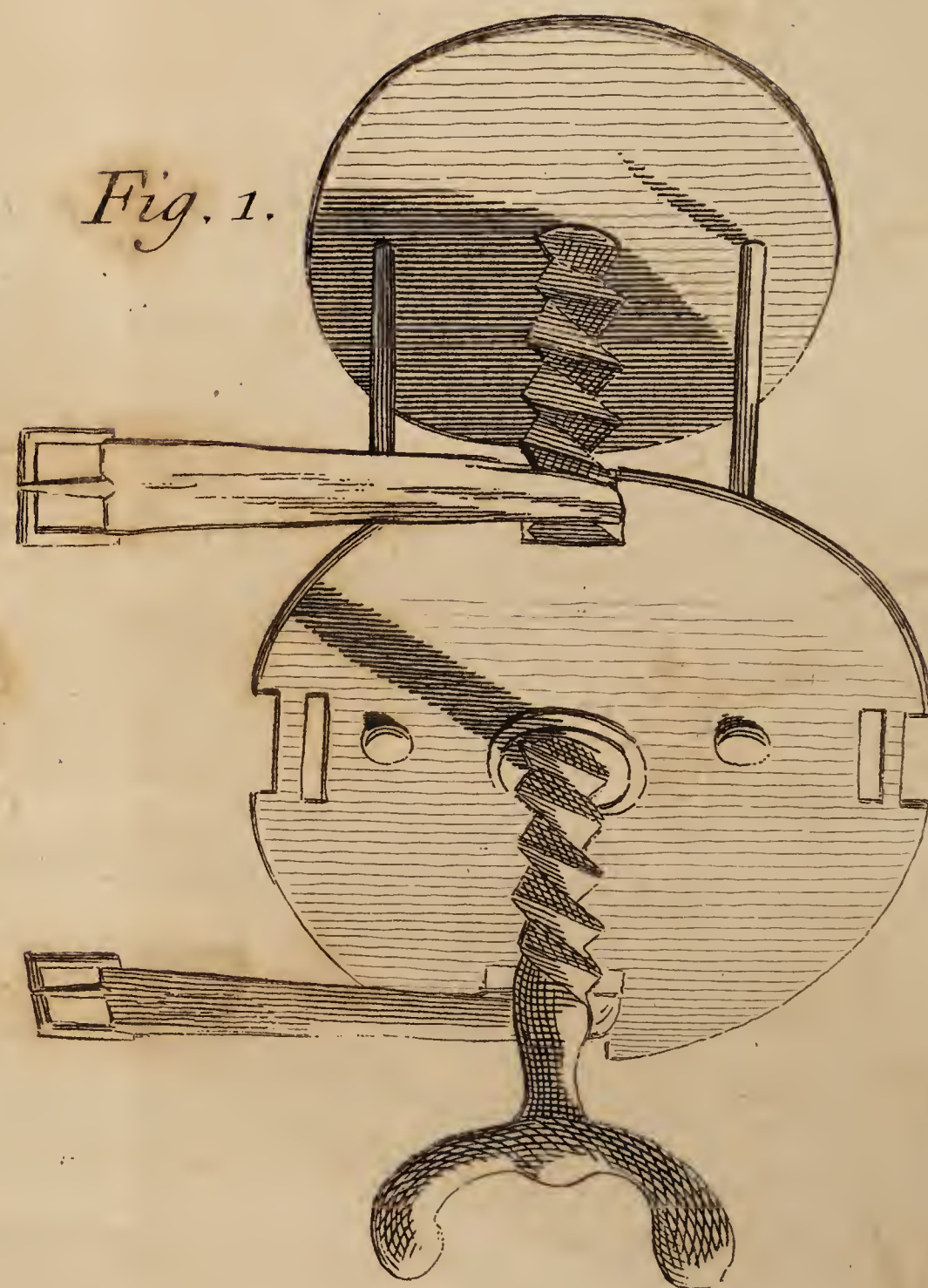


Fig. 2.

Fig. 1.

The opinion concerning coagula of blood plugging up the arteries after amputation of a limb, briefly considered.

INGENIOUS men sometimes offer experiments which are defective, or observations not well considered, to support their favourite notions : and when men of the greatest character and abilities advance any theory, urging at the same time an experiment, or observation to enforce it, we are too apt to yield our assent, without making such inquiry into it, as every investigator of truth ought to do.

THIS seems to have been the case in regard to Monsr. *Petit*, concerning *coagula* of blood being formed in the arteries, as the means of stopping the *hæmorrhage* after amputation. That great man, and those who have adopted his notion, positively assert, that upon examining the stump after
the

the death of the patient, they found *coagula* of blood continued up those canals even to the length of four inches : but granting this to be a fact, it cannot be admitted as conclusive evidence of their existence before, or till the patient is in *extremis*, when probably they may begin to be formed.

ACCORDING to that *Hypothesis*, the coagulated blood must either remain in the vessels or liquefy and return in a putrid state ; against either supposition, I think, many weighty objections might be brought, and experiments made to put the matter beyond controversy. It appears to me highly reasonable to suppose, that the native heat of the part, and the action of the vessels, keep the blood in a state of fluidity fit to be received by the collateral branches, when checked by natural or artificial means in its direct progressive course, after amputation of the limb, and that the divided vessels then retracting, collapse and coalesce as far as their first ramifications, having their mouths soon sealed up with flesh, growing from the nutritious vessels ; which

work

work of nature is pretty evident upon the stump. (a)

(a) Mr. *Kirkland*, a man of Character at *Asbby de la Zouch*, in his useful treatise upon *hæmorrhages*, and *Mons. Pouteau* Surgeon Major of the *Hôtel-Dieu* at *Lyons*, in his valuable Work entitled *Melanges de Chirurgie*, both published after the first Edition of my Cases and Remarks in Surgery, have mentioned experiments confirming my hypothesis and refuting *Mons. Petit's*.

Of fungous substances in restraining hæmorrhages.

THE use of fungous substances in restraining hæmorrhages, is the revival of an ancient practice, as appears from many undoubted authorities.

IF *Agaric* of the *Oak* could have been depended upon in all cases, instead of the needle and ligature, a painful part of operations would have been spared, and it must then have been considered as a discovery worthy of the high encomiums bestowed upon it by its advocates at first, who undoubtedly had the good of mankind in view. I used the *Agaric* twice successfully in amputations below the knee, as appears by my letter to Mr. *Warner*, Surgeon to *Guy's Hospital*, which he desired I would consent to the publication of in the *Philosophical Transactions* ; but it required great care in the application, and I never durst venture to rely upon its power above the knee ;

knee ; still it may be of use to a prudent Surgeon, and worth keeping by him.

I HAVE since made some experiments, by which it does not appear to me to have the characteristic of a styptic, or to act by a corrugating property, but rather by its soft texture and adhesive quality ; therefore, if that or any other similar substance should be farther tried in amputations, I would recommend the use of the compressive machine already mentioned, which Mr. *Layman* and I used in his patient's case, with great advantage.

FROM my own experience in many instances, *Puff-ball* is preferable to all other fungous substances in restraining hæmorrhages. (a)

(a) See more upon this subject in my treatise on Wounds.

A case in which the *Tibia* was affected to an extraordinary degree in a very short time, by a critical discharge of febrile matter upon a leg, which had been fractured some years before.

J. A. of N. B. about 40 years of age, was seized in *February* 1740, with a fever, attended with most violent symptoms, and in about a fortnight, a swelling suddenly appeared upon the whole leg, accompanied with great inflammation and pain, and matter was soon discovered from the knee to the ankle, which upon opening was found very ill-conditioned, and the bone carious its whole length:

Mr. *Barker*, an old practitioner of great skill and experience, and his son were concerned; Mr. *Layman* and I being consulted,

ed, were of opinion that amputation was the only means of preserving the patient's life.

UPON examining the limb after it was taken off, we found the *Tibia* full of purulent matter instead of marrow, which had corroded the bone quite through in an infinite number of places, and in two places it was totally divided, as appears by a representation of it, in Pl. 16. Fig. 4. No part of the bone was free from the *caries*, but the *callus* had evidently most resisted the acrimony of the matter.

THE man was in a very bad condition to bear the operation, on account of the fever, a cough, &c. but it succeeded, and he recovered a good state of health.

THE dreadful ravage the febrile matter here made in the boney compages, is a convincing evidence, to what a high degree of acrimony and corrosiveness animal juices may arrive in a short time. (a)

(a) See *Ruyfch's Thesaurus Anatomicus*, and *Cheselden's Osteology* in Fol. relative to diseased bones.—Doctor
Hunter

358 CASES and REMARKS

Hunter has a great many of a very extraordinary nature and appearance in his collection. About two years ago he shewed me a surprising thigh-bone then sent him from *St. George's Hospital*, which much resembled in size and figure a five-pint bottle with a long neck turned downwards.—Also see *Honstets* dissertation sur les *Exostoses des Os cylindriques*, en *Mem. de l'Acad. Roy de Chirurgie*. Tom 3.

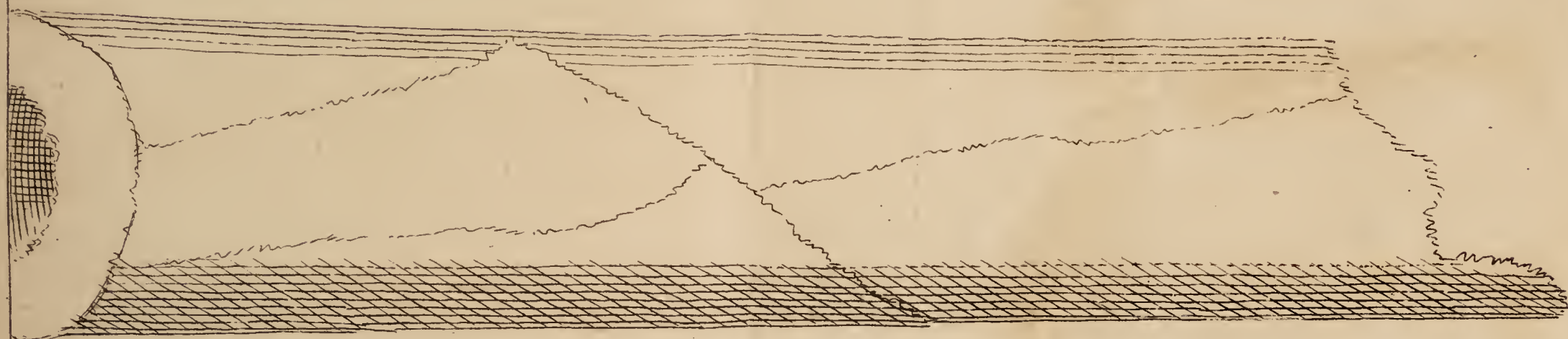


Fig. 1.



Fig. 3.



Fig. 4.

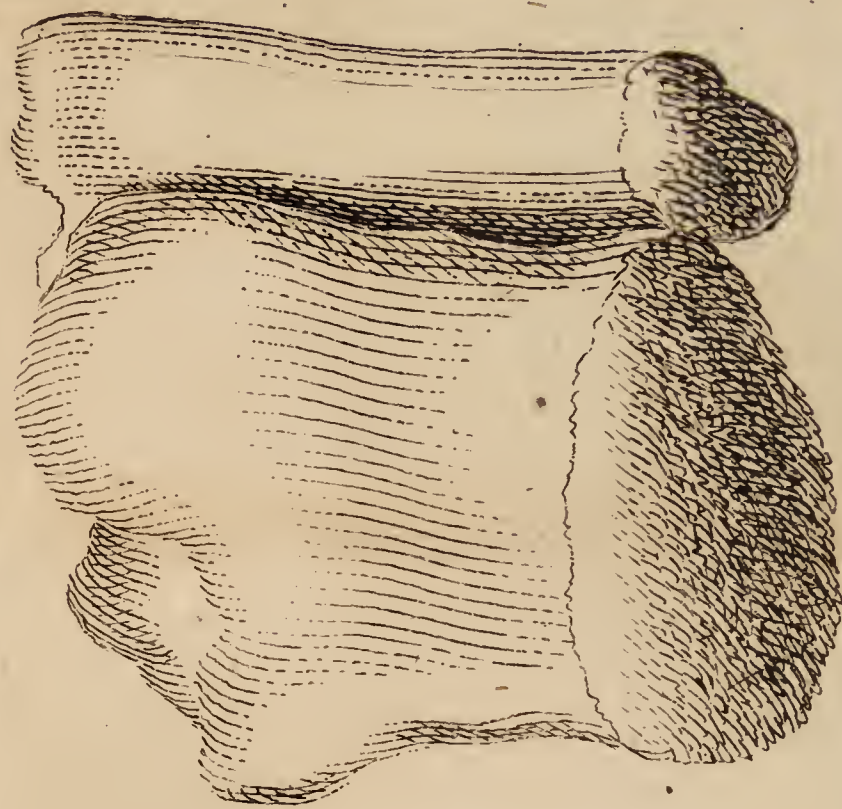


Fig. 2.

An ulcer with a *caries* of the *Tibia*, in which the actual cautery seemed of signal service.

June, 1743.

I WAS consulted for the Daughter of Mr. S. of W. at the desire of her Surgeon. She was of a lax, cachectic habit, and had an ulcer upon her leg with a *caries* of the bone of about four years standing, extending from three or four inches below the knee, near to the ankle-joint, which had been rationally treated by several Surgeons, without the use of the cautery.

AFTER carefully examining the case, finding the bone soft the whole length of the *caries*, and covered with hard ill-conditioned flesh, growing unequally out of the bone itself to a considerable thickness,

I

I imagined that the first step towards saving the limb must be to bring the bone into a state of dryness, with the actual cautery, the whole extent of the *caries*, in order to prevent the growth of fungous flesh from thence; for though many exfoliations had, from time to time, been obtained, yet they did not prove sufficient to lay the foundation for healing.

As caustics had been long tried in vain to lay the bone bare and keep it so, the patient and her Surgeon readily consenting, I cut quite round the ulcer to the bone, encompassing all the bad flesh by the incision, then scraped it clean off, and as much of the soft bone along with it as was practicable, with a *scalprum*, and dressed with dry lint; two days after, when that was removed, the cauterization of the bone to dryness effectually prevented any future vegetation of bad flesh to obstruct the cure. Afterwards I perforated the bone in several places with a small crown of the *trephine*, and found it affected in its whole thickness as I suspected. The weakness of the bone
confined

confined the patient to her bed, and obliged us to keep the limb encompassed with a case of stiff paper for some time, as in a fracture.

IN consequence of this method such exfoliations were obtained, as laid a foundation for the cure, which now proceeded very well ; but it was a work of long time to complete it. Particular care was taken to correct the *Dyscrasy* of her blood, by diet and medicine. She enjoys to this day good health and has no manner of complaint in the limb.

THOUGH the actual cautery is justly derided in carious bones in general, by the ablest Practitioners of the present age, yet this species of *caries* seems to require the use of it ; and I am convinced, from several instances, that it admits of it to great advantage : it answered beyond our expectation in this particular case, and I never saw so strong an instance of its efficacy. Though it must carry terror with it, yet this patient said she had suffered much more,

more, to no purpose, by the application and frequent repetition of the caustics. (a)

WHEN the dread of the patient will not allow of the use of the actual cautery in a case of this nature, after making the bone bare as mentioned, the *Lap. infernal.* or *Caust. commun. fort.* and *Spirit. Vitrioli.* may supply its place, in bringing the dis-tempered bone into the state of a dry caries, by first rubbing it well with a piece of the caustic, and then striking a small quantity of the spirit over it with a feather. This method I have also tried with good effect, — *Le Dran's Eau Mercurielle* mentioned at the end of his Observations, which is a solution of *Argent. viv.* part 1. in *Aq. fort.* part 2. is an excellent application for this purpose as I have experienced. — See notes at the conclusion of the chapter in my treatise on wounds, concerning applications to answer the different intentions of cure.

(a) Whilst I dwelt at *Norwich* I succeeded by the same treatment, in a similar case of more than seven years standing, which was deemed incurable,

Celsus says. *De Morbis Ossium.* Oportet autem ante omnia os nudare, ulcere exciso, & si latius est ejus vitium, quam ulcus fuit, carnem subsecare, donec undique os integrum pateat: tum id quod pingue est, semel iterumve satis est ad-

motu ferramento adurere, ut ex eo squama secedat; aut radere donec jam aliquid cruoris ostendatur, quæ integri ossis nota est; nam necesse est aridum sit id, quod vitiatum est. Idem in cartilagine quoque læsa faciendum est. Siquidem ea quoque scalpello radenda est, donec integrum id sit, quod relinquitur.—See *Vander Linden's* Edit. Pag. 539, or *Almeloveen's*, Pag. 508, which is the best Edition.—
I have succeeded by scraping cartilages, according to *Celsus's* direction, particularly those of the ribs.

Of a separation of the *Epiphysis Tibiæ*.

I WAS desired some years ago to give my opinion in a case where amputation was thought advisable, and proposed, on account of a separation of the *Epiphysis Tibiæ* in a lad about ten years of age, in consequence of a critical discharge of purulent matter in a fever.—Besides this there was an extensive and deep *caries* of the *Tibia*, over-run with fungous flesh, attended with a great degree of pain.—The mercurial solution mentioned in the last case was of singular service in subduing the *fungus*, and on that account highly extolled by the Surgeon, as he cou'd not keep it under before. Dry dressings then answered the end, the cure was in length of time effected, after having had large exfoliations, and the limb became perfectly useful.—In this case the tailed bandage, and paste-board-case to keep the limb steady were used

used as in a compound fracture, confining the patient wholly to his bed : it equally required such treatment ; for the *Epiphysis* was separated from the bone, so as to give a ready admission to the probe in different directions, and might well be considered as a fracture upon that account.

Of a moveable cartilaginous or bony substance in the knee, resembling that which is mentioned in the 4th vol. of the *Medical Essays*, attended with very singular circumstances.

IN *May*, 1762, an healthy young man, by trade a gardener, came to ask my advice in this case, and told me he had got a very painful swelling in his knee; I examined the knee but cou'd discover no swelling, upon which he answered, I will shew it you, Sir, presently, and then began to bend and extend the limb, pressing the outside and top of his thigh, just above the joint with his fingers, at the same time, and soon brought it to light on the inside, from under the *rectus* muscle near the superior part of the *Patella*: and now, says he, I can shew it you on the other side, and did so directly by the same means, pressing in the opposite direction, to my great astonishment, and then returned it to the place from whence it came. I did the same by the like manual operation, working

Working with my fingers as he bent and extended the limb. This moveable body seemed to take always the same course as if conducted by a leading string. During its quiescent state under the *rectus* he was free from pain, and could use his spade very well; but as soon as it slipped from that abode he lost the use of his limb, and it was attended with great pain upon motion.

FROM these considerations, and his utter aversion to have this moveable body taken out by incision, I was willing to try what would be the effect of a knee-piece, so contrived and padded as it might be easy, and keep it fixed under the muscle, in some expectation that it might in time adhere to the parts, and save the necessity of extirpation: for though he had some years before, now and then complained of a slight pain in his knee, which he thought to be rheumatic, yet he never discovered this knot, till immediately after a violent exertion in jumping over a ditch. As I have not heard of him for some years, hope this method was attended with success. (a) I

(a) The best manner of making a knee-piece to serve such a purpose, is according to that mentioned by way of note in the chapter upon distorted limbs.

I HAVE removed two such tumors by excision, which appeared more boney than cartilaginous; and believe I obviated bad accidents in consequence of the operation, by confining the patients to their beds directly, and wrapping the knee immediately up in an anodyne poultice, prepared with bread, milk, and oil, which was applied at every dressing night and morning for some time. From Professor *Simson's* letter on this subject to Professor *Monro*, inserted in the 4th vol. of the 4th Edit. of the *Medical Essays*, Pag. 246, we may infer that dreadful consequences may ensue, through want of attention to such precautions.

A singular dislocation of the *Astragalus*.

November the 30th, 1749.

MR. C. of W. falling with a ladder when he was near the top, his leg and foot fixed in such a manner between the staves, that the *Apophysis Tibiæ* catching hold of the *Astragalus*, wrung it out of its place, turning it upside down, and almost through the skin at the instep; the *Tibia* then rested upon the *Os Calcis* instead of the *Astragalus*, and the *Fibula* was thrown through the skin.

IN this situation of the bones they formed a kind of an arch, which rendered all attempts to reduction in vain; for the greater the extension and pressure made to that purpose, so much the more was the resistance to reduction.

I WAS joined in consultation with three able Surgeons the next day, and all things

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considered

considered, we unanimously thought it advisable to amputate the limb forthwith.

THE patient survived the operation twenty-seven days ; but a profuse *hæmorrhage* happened from the stump on the eighteenth day, and I got to him but just time enough to prevent his bleeding to death. I believe he lost his life through his own obstinacy and the imprudence of the nurse, in departing absolutely from our strict injunctions.

A mortification in a man aged eighty-one, where the *Bark* seemed to be of great service.

August the 24th, 1731.

I WAS called to J. H. of M. and found a deep mortification about the breadth of a crown-piece upon the side of his foot. Considering his age, his having been confined to his bed many years, and that he was a drinker of spirituous liquors to excess, there could be but little expectation of curing him ; yet it was necessary to prevent his becoming noisome to himself, and every body about him whilst he lived, which I confess I thought would be but a short time, as I told the parish officers who sent for me.

I DIRECTED a gummous and spirituous application and a warm *cataplasme* to the foot twice a day ; that he should take a

dose of an electary of the *Bark* and *Snake-root* every three hours, washing it down with a glass of anniseed-water, which had long been his favourite liquor ; and that his diet should be of good nutriment, warm and spicy.

AFTER regularly persevering in this method about a month, there was a separation of the dead parts from the living, at the junction of the *Ossa cuneiform.* and *metatars.* where I disjoined the foot, without any pain or loss of blood, and the stump was perfectly healed in three months. After this the poor creature lived more than a year, with as good health as for many years before, drinking gin or anniseed-water to the day of his death, saying he could not live without it, and that my indulging him with it, he was sure saved his life. (a)

SOME years after I disjoined a poor girl's foot at the same place, on account of a *Sphacelus* occasioned by her laying abroad
in

(a) In some instances of mortifications, I have seen singular good effects from giving the *Bark* in much larger quantities than commonly prescribed.

in a frosty night. She was greatly neglected, yet nature had made a separation of the dead parts from the living almost quite round, and to the bones in some places, before she was committed to my care. The stump healed without any extraordinary trouble, and she walked much better than she could have done with an artificial leg. — Bearing down the lower part of the foot strongly, whilst an assistant keeps the upper part steady, after having cut the ligaments on the top, very much facilitates the disjunction of the bones.

A scirrhus tumor upon the heel,
of a very threatening aspect, suc-
cessfully extirpated.

December the 29th, 1755.

MR. J. P. aged about twenty-five, of a good constitution, shewed me this tumor, and told me that he believed it proceeded originally from an external injury received about twenty years ago. In four or five years it grew gradually to the size of a pigeon's egg, was moveable and exquisitely painful, especially in the night when warm in bed. He took the advice of a Surgeon about that time, who applied a caustic, which did not penetrate far into it; the application of the caustic was repeated several times to no purpose. After this treatment the tumor increased faster than it had done at any time before, and in a few years acquired the magnitude of a hen's egg. Thus it remained many years,
attended

attended with such exquisite sensibility, that he could scarce bear to touch it in the gentlest manner ; and this was the state of it when he applied to me.

THE tumor now extended from the point of the heel, and was attached in its whole extent, to the *Tendo Achillis*. Under these circumstances, there appearing in consultation, no probability of relieving the patient otherwise, I was encouraged to undertake the extirpation of it ; but first prognosticated that it might shew itself of a very ill character after the operation, yet the patient having endured so much with it many years, and it growing daily worse, desired to take his chance for a cure. In the operation I cut as close to the bone of the heel as I could, without leaving it bare, and carefully dissected the tumor from the tendon ; the operation was excessively painful, but the wound healed very kindly, and the patient was amply rewarded for his resolution, by a speedy cure and continuing well to this day.

A scrophulous *caries* of the *Os Hu-*
meri, &c, cured after being ill
treated, and the limb condemned
to be taken off.

February the 2d, 1742.

MR. D. R. of M. put his daughter,
aged about fifteen, under my care,
after having been under that of two prac-
titioners, who had the misfortune to want
a regular education in Surgery, and to be
quite ignorant of Anatomy. In opening a
sinus up the arm from the joint in an ob-
lique direction, they totally divided one of
the *extensors* of the wrist, and wondered,
as well as the patient's father, at seeing the
hand instantly fall, when the incision was
made at such a distance : they had also in-
judiciously passed a seton under the ten-
don of the *Biceps*, which caused great pain
every day by its irritation upon moving
it ;

it; and they had introduced tents and hard doffils into several *sinuses*, frequently covering them with *Escharotics*, to consume luxuriant flesh that was perpetually growing up.

UNDER this treatment I found the limb exceedingly swelled, inflamed and painful, especially round the joint, which was become quite stiff, and an extensive *caries* upon the *Os Humeri*, seeming to penetrate deep into its substance: a continual fever was kept up by putrid matter passing into her blood, and probably other acrimonious particles mixed with it, from the frequent application of the *Escharotics*; which by keeping her in constant pain and breaking her rest, added much to the fever.

I THREW out the tents, hard doffils and seton forthwith, dressed superficially with dry lint and a soft cooling *cerate* over it, treating the case in all respects in the easiest and gentlest manner; by which means it soon had a more favourable appearance: she was immediately freed from the tormenting pain she had long endured, and found a sensible abatement of the fever, which went off gradually. BY

By this gentle kind of treatment, nature not being interrupted in her work, cast off thick exfoliations from the carious bones, and effected a cure in about six months after the condemnation of the limb : which is now as useful as an *Anchylosis* at the elbow joint, with an impossibility of raising her hand, will admit of ; and she is capable of almost every kind of family business.

A tumor of the lymphatic kind, of an enormous size, upon a woman's arm between sixty and seventy years of age, extending from above the elbow to the wrist, which had been gradually increasng more than fifty years, and then turned cancerous.

SOME years ago, my friend Mr. *Cooper*, whom I have already mentioned, shewed me this tumor, when it could easily be moved upon the muscles ; and the woman then had the free use and motion of her hand, fingers and elbow-joint.

THE tumor was little or no pain to her, but what arose from its weight, which she supported with a sling ; the circumference of it then was near four feet, measuring from the elbow to the hand, and she resolved to carry it to the grave with her.

About

About two years after, it beginning to have a cancerous aspect, and there being reason to fear it would become very offensive to herself and every body about her, she was advised in a consultation of four Surgeons, to have her arm taken off; but she then absolutely refused to submit to the operation: some months after, when she had experienced what she was told would in all probability be the consequence of keeping her limb, she was very desirous of losing it, but it was then too late; a fever and *Diarrhæa* seized her soon after, and released her from her miserable condition.

This tumor appeared to us vascular and vesicular; for we could not be sensible of a fluctuation, as in a quantity of a fluid collected together. The stench was so offensive immediately after her death, that Mr. Cooper durst not examine into the nature of the tumor. In the *German Ephemerides* we read of a tumor of this nature upon a woman's arm of a most prodigious size.

A tumor of the *ganglion* and *steatomatous* Species mixt together.

June the 4th, 1734.

MR. R. W. a very robust man, aged about forty, asked my advice concerning a large tumor without any external inflammation, extending from his wrist to the middle of the back of his hand, which he told me was occasioned by a violent strain three or four years before, and that it was now become extremely painful ; his hand was entirely useless, hanging down and making a right angle with the fore arm, no proper care having been taken to support it.

UPON opening the tumor I found a fluid like the white of an egg, with a great many lumps of a substance suspended in it, resembling in color and form cloves of peeled garlic *. I cut away immediately as much

* I am inclined to think, as I have before mentioned, in the chapter on *Wens*, that this kind of substance resembling suet, in those called *steatomatous* tumors, is only inspissated lymph : and I believe the three tumors there specified, under different appellations, are all of a lymphatic nature, the lymph in their contents appearing under different degrees of inspissation.

much as I could of the *cyst*, the rest digested off, and by the common treatment the cure was easily effected so far as to heal the ulcer ; but it was a long while before the contractile power of the muscles could be recovered to elevate the hand, and the motion of the fingers was restored with equal difficulty, the tendons, by long disuse, being grown very rigid, and the *Synovia* in their sheaths inspissated.

THE use of the machine described in Pl. 15. to keep up his hand, and so contrived as to give an opportunity of moving the joints of the wrist and fingers, contributed very much to regain their motion. He kept the parts about half an hour twice a day, in a warm decoction of sheeps trotters to relax the rigid *fibres* and attenuate the inspissated *Synovia*. (a)

AFTERWARDS

(a) The proper degree of heat for baths and fomentations, is that which gives a pleasing sensation of warmth to the parts, as it relaxes them and fuses the sluggish, inert matter, putting it in a condition to be propelled by the action of the solids ; but they will have quite contrary effects, if the heat be intense and gives pain. I have found a vapor-bath very efficacious in relaxing rigid fibres; but for limbs obstinately rigid and contracted,

AFTERWARDS, when the wrist and fingers could bear to be moved freely without pain, I ordered that cold water should be pumped upon them every morning, for a few minutes, by which the tone of the parts was perfectly restored, and the patient used his hand, in five or six months, almost as well as he did before the accident. The

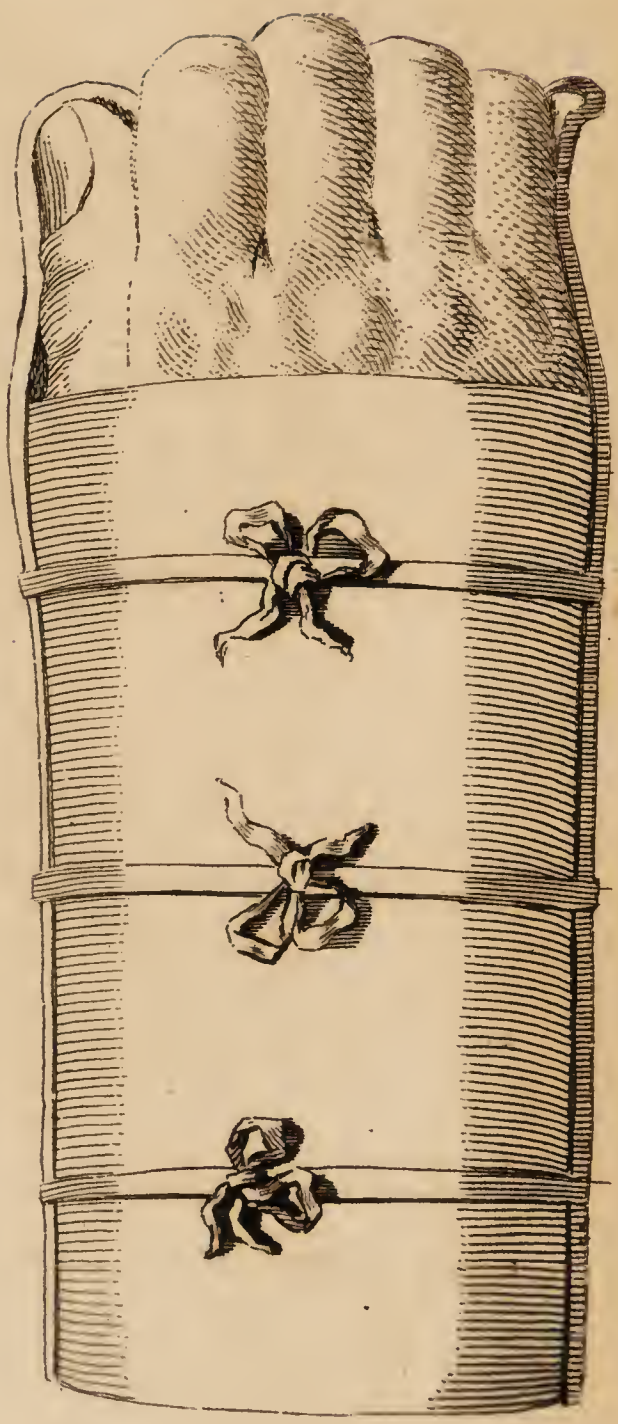
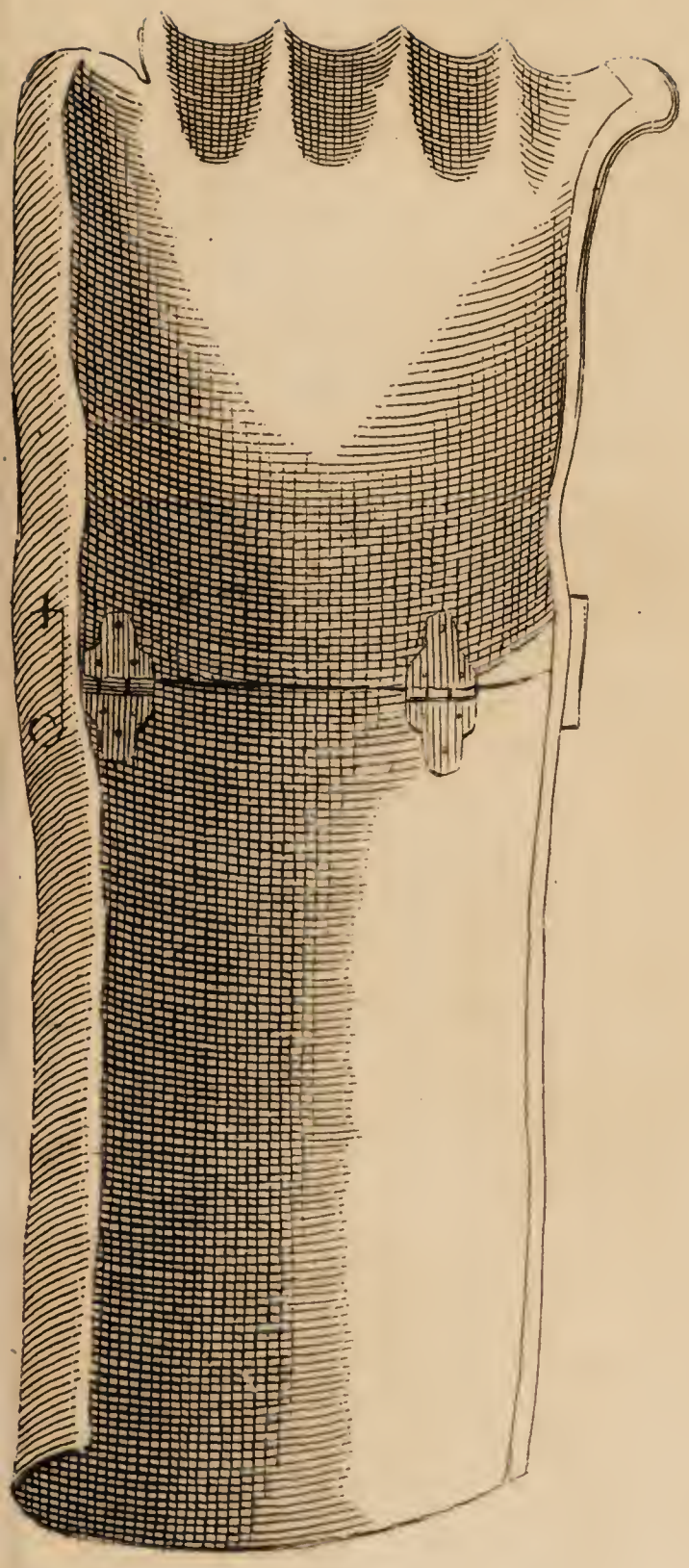
ted, nothing is so efficacious as having the water of natural tepid baths pumped upon them, using proper relaxing embrocations immediately after, gently moving and extending the limb, at the same time ; for such motion is absolutely necessary to accomplish the point in view under these circumstances. I know the happy effect of such waters, by experience in my own case, which required my going twice to *Bath*.

Explanation of PLATE 15.

This machine should be made a little concave, of light tough wood, such as beech, willow or alder ; and be covered with leather to be glued unto the wood. Its dimensions for a limb of a common size should be about ten inches long and three and a half broad. Besides the hooks shewn upon the sides, it should have one in the middle. It is to be confined to the limb with fillets tied upon stiff paper as described.

I have found this very simple machine of signal service in luxations of the wrist, and in fractures near that joint, as well as in other cases where it is necessary to have the hand supported, and also occasionally kept in gentle motion to preserve the flexure of the joint ; and it has been much approved by many of my Brethren.

Rule-joints may be used to more advantage, where there is no occasion to drop the hand ; and they will allow of a little motion upwards ; when they are used no hooks are required upon the machine.



A wound of the *tendons*.

August the 19th, 1736.

J. P. of T. an healthy strong man, in the time of harvest, having his sickle stuck in the side pocket of his breeches, according to the custom of reapers when they bind up their sheaves, and by throwing a stone in sport at one of the gleaners, the sickle caught his arm, in its full swing and force, and totally divided the *Flexors* about two inches above the wrist. The man being hot at his work, the wound bled profusely, but one of the women had presence of mind and resolution to tie her garter strait about his arm, which effectually restrained the *hæmorrhage* till I got to him.

THE ends of the divided *tendons* were drawn far asunder, but by bending the wrist and forcing down the muscles, I brought them into contact as much as I possibly cou'd, keeping them so by stitching and bandage. The wound healed kind-

A a

ly;

ly, and was quite cicatrized in little more than a month; he recovered the perfect use of his arm, hand and fingers soon after, but sensation was destroyed below the wound, and never after restored.

THE notion of healing by the first intention, being now, I believe, pretty generally exploded, stitching of wounds will consequently be less practised; though it may still be found useful and necessary in some cases.

THOUGH I was not sensible of any inconvenience arising from stitching in this wound, yet I am inclined to think, that it would in general be better omitted in tendinous or membranous parts. I have been concerned in two cases where the *Tendo Achillis* was totally divided by cutting instruments; one of these wounds I stitched, the other I did not; both were cured without ill accidents, but that which I did not stitch I thought healed more kindly than the other. I used *Petit's* bandage, described in his *Treatise upon Diseases of the Bones*, in both cases. Bending the
knee

knee a little and extending the foot is evidently the proper position to keep the limb in on this occasion. There is a very ingenious and excellent contrivance for the same purpose as *Petit's* bandage, invented since by Professor *Monro* for himself, in the first Volume of the *Edinburgh Essays and Observations*, physical and literary.

As a Horse is the noblest animal of the brute creation, and the most useful to man, I doubt not but I shall be readily excused in saying a word or two here, concerning an accident which happened to a valuable one of my own, by the carelessness of a servant, where the *tendon* of the fore leg, whose use is similar to the *Tendo Achillis* in the human species, was totally divided in the middle, and the ends considerably separated ; which wound was perfectly cured without stitching, by Mr. *Clover* of *Norwich*. The horse now travels without impediment ; but by using him rather too soon, after the wound was healed, I was under a necessity of giving him rest after-

wards. The machine Mr. *Clover* invented on this occasion, as represented in Pl. 13. Fig. 2. contributed much to the cure, which probably could not have been effected without it; and such an invention has been of more service to him since, in the cure of a fracture upon a horse's leg, by which it was performed without difficulty; but in that case he added a thin concave plate, adapted to the fore part of the leg, to defend it, and also to strengthen the machine, very ingeniously made and connected to that behind, resting upon the *coronet*, by a contrivance coming up thither from the toe of the shoe, to keep it steadily fixed to that part: and with these additions the machine is better accommodated to serve the purpose in the division of a *tendon*; through want of such a defence on the fore part, my horse's leg was galled.

Mr. *Clover's* letter concerning the use of the machine described in Pl. 13. Fig. 3.

Norwich, Dec. 15th, 1766.

S I R,

AT your desire, I have attempted to delineate the machine, which succeeded beyond my expectation, in the cure of a fracture upon an horse's leg, without the usual method of suspending him, which is attended with many inconveniences.— I am afraid you will not think the machine clearly enough shewn in my sketch; for not being well acquainted with perspective, I must confess myself at a loss to project upon paper, the figure of it, to my own satisfaction; and therefore doubt of its being so intelligible to others as it ought to be: but, perhaps your Engraver may rectify its defects, if he considers its use, and reads the following explanation of it.

A. G. and B. H. the two chief supporters of the leg, are made of such length as

to reach from the knee of the fore leg, or hock-joint of the hind leg, to the parts of the shoe marked I and K. A. G. being made thin and concave to receive the fore part of the leg. And B. H. flat and stronger, especially from N. to H. in order to support the weight of the horse without bending at N, where a thin plate is affixed on each side, suitably concave to receive the fetlock-joint, which effectually prevents the turning of the machine to either side. The circular parts C. D. and E. F. are made thin and turned back about an inch at the ends O. P. and Q. R. for the convenience of introducing the screw-pins, and fixing them to the necessary degree of tightness. The other circular part S. T. will be sufficiently secured by a small leather strap with a buckle. In each longitudinal plate several screw-holes ought to be made, between B. and N. A. and X. the better to fix the bows C. D. and E. F. in the most convenient and necessary parts; and the upper one being covered with woollen list, or something soft, may be placed in such manner under the knee, or hock-joint, as to receive a portion of the horse's weight, and

in

in some degree, prevent the ends of the fractured bone from pressing too hard upon each other.

WHEN the whole machine is put together, the end H. goes through the hole of the shoe K. and by a screw is fastened to the heel marked M. which may be made higher or lower at discretion ; and the end G. is to pass through I. in the part L. Z. turned up from the toe of the shoe to the top of the *Coronet* of the foot, where it is to be secured with a screw through the holes G. and L. by which means, and by the screws at C. D. E. F. and T. the whole may be put together or taken to pieces, with very little trouble, as circumstances require.—I wish I cou'd have better represented the concavity in the pillar A. G. which by being so made is both stronger and lighter, besides being adapted to receive with greater ease, that part of the limb.---The whole of the machine, which I made upon this exigence, shoe and all, weighed but two pounds and three quarters, for an horse fifteen hands and an half high, which had his hind leg badly broken, and was
cured,

cured, fit for work, in about twelve weeks.

It will give me much pleasure, if what I have sketched with my pencil and written, may answer your good design of communicating to the world, what may prove beneficial to the noblest creature of the brute creation, and so useful to mankind that he ought by no means to be neglected.——The machine constructed as here directed, I believe wou'd have answered the purpose better in your horse's case, with the total division of the *tendon*, than that which was used, and effectually have prevented some inconveniences, which occurred in the cure of that wound.

I HOPE to hear your health is improving, and the more ardently pray for the perfect recovery of it, well knowing it will tend to the good of others.

I am,

Sir,

Your much obliged

and faithful humble servant,

JOS. CLOVER.

IN the cure of a *tendon* ruptured, or totally divided by incision, when there is good reason to suppose the parts may be sufficiently agglutinated, great care is requisite in dropping the heel, which shou'd be done gradually, for obvious reasons; as, shou'd not the union of the *tendon* be destroyed, by bearing upon the limb too soon, it may swell, occasioning pain, and some degree of lameness; which was the case in respect to my own horse, as has been mentioned; though now he travels well, without being more stiff after a long journey than before it: some stiffness was unavoidable, as the *tendon* cou'd not have its natural free motion in its sheath preserved.

A very extraordinary Burn.

July the 15th, 1757.

M. H. servant to Mr. K. of T. arose between two and three of the clock this morning, in a violent tempest of thunder and lightning, and went into her master's room, where she struck fire, and whilst she was lighting a candle, having no covering but her cap, shift and one petticoat, a fiery meteor, accompanied with a most tremendous clap of thunder, broke through the roof of the house, and descended to this room, which was upon the ground floor, and burnt her from the crown of her head to the soles of her feet and fingers ends, in a most dreadful manner indeed. Her master, in the utmost consternation, jumped out of bed, first extinguished the fire upon her cap, &c. then running out abroad, saw the roof blazing in a narrow compass, raised a ladder instantly, and poured water into the hole where he supposed the fire-ball passed, but to no purpose,

pose, the house being all in flames before any assistance could be procured.

IN this hurry and confusion the woman was some time neglected, and when carried out of the house had neither sense nor motion ; soon after she discovered some signs of life, but remained many days without senses or sight, though her eyes were not burnt so much as the other parts. The burn grew every where exquisitely sensible to the touch, and uncommonly painful ; a most violent fever immediately ensued, attended, after about a week's continuance, with as thick a thrush as I ever saw. We almost despaired of her life ; but at length she recovered, and has her senses, sight, and use of her limbs, perfectly.

THE dressings were chiefly *Ol. Lini* and *Cerate* prepared with that, *Cera* and *Unguent. e Floribus Sambuci*. Bleeding repeatedly was found necessary, and an exact observance of the Regimen advised in inflammatory fevers, with the frequent use of *opiates* to assuage the intolerable pain and soreness of the parts, taking particular care to keep her body open.

Some

Some extraordinary effects of a fever.

June the 26th, 1740.

I WAS accidentally called in to see the son of J. P. of B. between 13 and 14 years of age, whom I found spinning at the wheel, totally deprived of hearing and sight, but it was his deafness I was desired to give my advice in ; for the very globes of his eyes were sunk in their orbits, and left his parents not the least hope of his ever seeing again, nor could I give them any hopes of his ever hearing, after having examined his ears.

THE account they gave me of this poor unfortunate creature was, that about six months before, he was seized with a violent fever, which soon deprived him of his senses, and that it was eight or nine weeks before they had any expectation of his surviving it ; but, being very poor, no medical assistance was procured for him. During this time he totally lost his hearing and sight, the color of the hair of his head was changed from a dark brown to almost white,

white; and was as soft as an old persons of eighty or ninety, excepting on the *Vertex*, where it retained its natural color about the breadth of a crown-piece ; the hair of his eye-brows had suffered the same alteration : I also observed along the course of the *coronal*, *sagittal* and *lambdoidal sutures*, bony ridges half as thick as my finger.

THE boy now appeared in good health and in a thriving condition, did not seem to want understanding, and could find his way alone to some houses at a considerable distance, where he used to go formerly, and had gone since the loss of his fight with his mother.

ABOUT seven years after, as I was travelling that way, my curiosity led me to inquire after and see this person again. His mother led him to me, I observed the hair of his head rather whiter, lank and soft, and brown upon the crown of his head as when I saw him before ; his beard was now beginning to sprout, which was the natural brown color of his hair, his face looked still rather boyish, but there was a very strange mixture and appearance of youth and old age in it.

A case of fragility, flexibility and dissolution of the bones, which I drew up formerly at the request of a friend, in order for him to transmit to Doctor *Pringle*,* who desired an account of it, to communicate to the Royal Society.

*M*ARY Hayes, of *Stoke-Holy-Cross* near *Norwich* in *Norfolk*, was born *January* the 11th, 1718; had never been married, and always lived a regular, temperate life: her father was unhealthy, but it is not known to what disease he was subject: her mother was healthy; and she herself was always looked upon as a strong healthy girl, till about fifteen years of age, when she fell into the green-sickness, and took various medicines to no purpose. She had no other complaints till *October* 1748, when she was seized with pains universally, attended with feverish symptoms; and thus she continued
some

* Now Sir *John Pringle*, Physician to the Queen.

some weeks, after which the pain was chiefly confined to her legs and thighs, but not increased by external pressure.

SHE broke her leg in *June* 1749, as she was walking from the bed to her chair without falling down, and heard the bones snap. The fracture was properly treated by one of the ablest Surgeons, and due regard had to her indisposition ; no *callus* was generated, but the bones grew flexible from the knee to the ankle, in a few months : those of the other leg and thigh were visibly affected soon after, in the like manner ; and both legs and thighs then became *œdematous* and subject to excoriate, discharging a thin yellow *Ichor*. About this time I first saw her with the Surgeon who had the care of her.

THE winter after breaking her leg, she had symptoms of the scurvy, and bled much at the gums.

MANY eminent Physicians prescribed for her, but without any effect, unless the regularity of her menstruation for the last 18 months be ascribed to chalybeate medicines, which were part of their prescriptions ; tho'
the

the same kind of medicines were formerly prescribed, and long continued, without having that effect, even when she was in a condition to take exercise.

ABOUT a year before her death, she was removed to the parish she belonged to, where I had an opportunity of visiting her often, and observing the progress of her disease. She told me, she had found but little alteration of her complaints in general for some time past, and thought her appetite and digestion rather mended : she breathed with difficulty, and her *Thorax* appeared so much straitened as necessarily impeded the expansion of the lungs : her *spine* was much distorted, and any motion of the *vertebræ* of the loins excited extreme pain : her legs and thighs being quite useless, she was confined to her bed in a sitting posture : the bones she rested upon having lost their solidity, were much spread, and the ends of her fingers and thumbs, by frequent efforts to raise herself, were become very broad, with a curvature of their *Phalanges* : she now measured but four feet, though before this disease she was five feet and a half high, and well shaped.

FROM

FROM this time I observed the flexibility of her bones became gradually more general, and the difficulty of breathing increased, with a wasting of her flesh. For the last four months of her life she had a total suppression of the menstrual discharge, and a great tendency in her legs to mortify, which had long been anasarcous and excoriated almost all over. She retained her senses perfectly to the last, and but a few minutes before she died, talked concerning her miserable condition and approaching end, in a very rational and composed manner, with her nurse, who perceived no signs of the change which was just at hand; then reclined her head, and expired instantly without a groan.

Two days after her death, which happened on *February* the 6th, 1753, her limbs being first well stretched out, she was measured and found wanting in her natural stature two feet and two inches. I opened the *Abdomen* and *Tborax*, removing the *Sternum* entirely, with some portion of the ribs, in order to gain at once a full view of those cavities, and to observe how the *viscera*

contained in them had obstructed each other, in their respective functions, as well as to inspect the state of them. The *heart* and *lungs* were found, but flaccid and much confined in their motion, to which the enormous size of the liver contributed in some measure, extending quite across the *Abdomen*, and bearing hard against the *Diaphragm* by its increased gibbosity: the *lungs* did not adhere to the *Pleura*, nor was the *liver* scirrhus, it was faulty only in its bulk: the *mesentery* was found, except one large scirrhus gland in it: the *spleen* was extremely small. Nothing else was found observable in these cavities.

ALL her bones, except her teeth, were more or less affected, and scarce any would resist the knife; those of the *Head*, *Thorax*, *Spine* and *Pelvis* were nearly of the same degree of softness; those of the lower extremities were much more dissolved than those of the upper or of any other part; they were changed into a kind of *parenchymous* substance like soft dark coloured liver, without the least offensive smell. I cut through their whole length without turning the edge of
of

of the knife, and found less resistance than firm muscular flesh would have made, meeting only here and there with boney *Laminæ* thin as an egg-shell.

THOSE bones were most dissolved, which in their natural state are most compact, and contain most marrow in their cavities. This circumstance may appear the more worthy of observation, as it held throughout, and looks as if the wonderful change they had undergone, was occasioned by the marrow having acquired a dissolving quality; for it was evident, that the dissolution began internally, by the boney *Laminæ* remaining here and there on the outside and no where else, and the pain in the beginning of the disease not being increased by external pressure.

THE *Periosteum* was rather thicker than ordinary, the *Cartilages* thinner, but no where in a state of dissolution like the bones.

I INTENDED to have opened the skull and examined the brain, had I been allowed time enough; but there was no reason, from any complaints, to suspect a defect in that part.

AN eminent Physician and Surgeon were present at this examination of the body. Some time after, I shewed specimens of the dissolved bones to Sir *John Pringle* in *London*, and then sent them to Doctor *Hunter*, who has occasionally exhibited them in his anatomical lectures.

I ALSO sent some of the same substance to an ingenious Chymist, desiring him to analyze it, with the utmost care and exactness, and he informed me, by the experiments he made, he could discover neither acid nor alkali prevailing in it; but that it contained near seven eights of an oleaginous substance, with a small portion of earth.

July 1753 I saw a similar case to this in a woman, aged 25, in the work-house at *Norwich*, under the care of Mr. *Swift*, an ingenious man, and a very able Surgeon. He obtained an order from the Court of Guardians to detain the body after death for our inspection; but as soon as the woman was dead, what was intended to be done spreading abroad, a mob rose and peremptorily demanded the body to inter it; and the

the master of the house delivered it, fearing bad consequences might ensue upon refusal ; and so we were disappointed in our intended inquiry.

IN this woman's case the ribs, being grown very soft, fell with the *Sternum* flat upon the *lungs*, and obstructed respiration to such a degree, that when I saw her she laid panting for life. The contrary happened in the case I have been given a narrative of ; there the ribs and *Sternum* turned outwards, by which circumstance respiration was not so much obstructed, tho' the capacity of the *Thorax* was greatly shortened, and the *lungs* had not room to expand freely.

We meet with cases of this nature in the *Philos. Transact.*—*Mem. de l'Acad. Roy. des Sciences.*—*Act. Hafniens.*—*German Ephem.*—In *Forestus* and *Saviard* ; and a very extraordinary one of this kind was published at *Paris* by Doctor *Morand* in 1752.—I saw in the Hospital at *Bath*, a surprising case of fragility of the bones, supposed to proceed from a venereal cause ; both arms and legs were then broken, and many other bones affected.

Of the cure of the *Thrush*.

AS I think no person shou'd keep to himself the knowledge of what may prove beneficial to mankind, I publish in this manner the following medicine, which I know, from much experience, may be relied on in the cure even of the worst kind of *Thrush* in bad fevers ; though indeed I have made no secret of it, but have mentioned it, as opportunity offered, to all my medical acquaintance, after I was so fortunate as to make a discovery of it above 20 years ago. It had long been in the possession of a woman, who was sent for far and near upon this occasion, with constant success, to which I had often been a witness. This induced me to offer her a considerable gratuity to divulge the secret, but though she refused to do so, I have undoubted evidence, that the medicine I here mention is the very same as her's.

Its composition is *borax* and *boney*; the proportion of a dram of the *borax* in very
fine

fine powder to an ounce of pure *honey*, just of such consistence as to suspend the powder, is sufficient to answer the end in common cases, but in some, I have put in two drams, never more. I direct the patient to take a tea-spoonful or two of this *Linctus* every hour, after stirring it well together, swallowing it leisurely, and in such a manner as it may spread itself all over the mouth and throat. I have seldom known a bad *Thrush* resist the power of this medicine more than two or three days regular use of it. After the *Thrush* is removed, the patient sometimes complains of a smarting and tenderness of the parts, which are soon eased by frequently holding in the mouth a mucilage of *Sem. Cydon.* or a solution of *pulv. e Trag. comp. in aq. Rosar. damascenar.* to a mucilaginous consistence, sweetened with *Syrup. Mororum* : or by the use of a smooth emollient gargarism.--- I have sometimes ordered the *borax* to be mixt with clarified *honey* and *currant-jelly* equal parts, instead of *honey* alone, and in that manner it makes a more agreeable medicine. Where there is a peculiarity in the constitution that *honey* disagrees, the *borax* may

may be mixt with either black or red *currant-jelly*, and *Syrup. moror.*

THIS medicine, made milder, has also been found by experience, very beneficial in the *Thrush* attending infants.

Many years ago I attended a young woman in a bad fever, who in the course of it had an appearance of the *Thrush* to a high degree, about the *Anus* as well as in her mouth and throat; and undoubtedly all the alimentary canal was affected; for upon taking this medicine liberally, and keeping her body open, great quantities of thick floughs were thrown off by stool; and she recovered beyond expectation.

The extraordinary effect of the *Indian-Pink* in destroying worms.

July the 7th, 1760.

A POOR widow brought her son to me, aged between ten and eleven, much afflicted with worms, and had long been so, with almost all the symptoms produced by those vermin, the *Teretes*, many of which he had lately vomited up. I made an infusion of thirty grains of the *Indian-Pink* in a quarter of a Pint of boiling water, letting it stand by the fire close covered five or six hours; and ordered one half of it to be taken at going to bed, and the other next morning; and in the following afternoon he voided by stool four worms alive. Next night and morning repeated the doses; in the afternoon following voided five more alive at one dejection, the *fæces* not altered in their consistence from their natural state. The doses were repeated the two succeeding evenings

evenings and mornings ; only the infusion was increased one third in its strength ; and in each of the following afternoons he discharged three worms dead and seemingly much swelled. After these he took two doses more, but no worms were brought away : he soon recovered a good appetite, and was entirely freed from all his complaints.

THIS medicine answered the same good purpose, in another of the woman's children some time after.

THEY both agreed in this circumstance, that upon first taking the medicine, they were sensible of the motion of the worms downward, as if they fled from it, according to their own expression.

There are four kinds of worms commonly found in the human body ; the *Lumbrici* or *Teretes*, whose residence is generally in the small *intestines* :——the *Ascarides* in the large *intestines* :——the *Gourd-Worm*, so called from its resemblance to the seed of a gourd :——the *Tænia*, *Tape* or *Solitary Worm*. This latter species is frequently found among the *Indians* and *Africans*, in *Geneva* and all over *Switzerland*. I am credibly informed that there is a woman at or near *Geneva*, who is possessed of an infallible secret to destroy this formidable enemy.

When

When I was concerned for the poor in *Norwich*, between 30 and 40 years ago, one of the first kind eat its way through near the navel of a child about three years old, in the work-house. The wound healed without any difficulty, and the child recovered, by taking proper medicines, which brought away a great number of those destructive vermin.—See *Andry's* and *Coulet's* treatise upon this subject: and what *Doctor Tyson* says in the *Philos. Transf.* concerning the *Tænia*; of which sort I saw one that was voided whole, by a Negro, near 20 feet long.—See *Professor Alston's* account of the anthelmintic virtue of the powder of Tin, in vol. 5 of the *Edinburgh Med. Essays*.—I had a patient who was freed from the *Ascarides*, by the long continued use of Soap and Lime-Water on account of the stone in his bladder, when all other means had failed in destroying them.

Copy of a letter from a Clergyman concerning the wonderful effect of *Cort. Rad. Simaroubæ* in curing him of a *Dysentery*, after all other means, commonly used in that disease, had failed.

Dear Sir,

Long-Stratton,
Nov. 23d, 1763.

I HERE send you the best history I am able to compose, at this distance of time, it being now above ten years since I was first afflicted with the *Bloody-Flux*; therefore whatever inaccuracies you shall observe, you will be pleased to pass them over; and if you can discover any thing which will be of service to others, I shall think myself sufficiently rewarded for my trouble.

I am, dear Sir,
Your much obliged Servant,
EDWARD HIBGAME.
History

History of the case.

IN October 1752 I was at *Canton* in *China*, and after drinking too freely of white-port-wine one evening, the next day I was seized with a violent *Flux*, which after continuing two days turned to the *Bloody-Flux*.——I immediately applied to our Ship-Surgeon, and he prescribed me vomits of *Ipecacoanha* for three successive evenings. I then took *Ipecacoanha* in small doses, in white wine every four hours ; thus I went on for two months ; and in that time I was let blood twice or thrice.—After this our ship sailed for *England*, and the Surgeon finding my disease rather increased, he determined to try another method.——After letting me blood, he gave me every other day a small quantity of the *Calamine-Stone* well levigated ; this I continued for one month, taking the *Ipecac.* as before ; but on my complaining of the violence of this new medicine, he omitted it, and gave me some doses of *Armenian Bole* every day ; but neither the *Ipecac.* *Calamine* or *Bole*
had

had any effect in abating my *Flux*.——For one month before we arrived in *England* all medicines were laid aside, neither had I recourse to any till *August*, when finding the *Flux* increasing, my strength decreasing, and my appetite lost, I was advised to take pills composed of mutton-tallow and bees-wax twice a day, as many as my stomach wou'd bear, with a glass of red port wine with a few drops of *Tinct. Terræ japon.* after each dose, which I thought helped my appetite ; but I cou'd discover no abatement of the *Flux*.——At this time I applied to a Surgeon at home, who advised the use of the *Bark* with *Rhubarb*, *Stomach Drops*, *Sago*, *Rice*, &c.——I then consulted a Physician, who first prescribed the testaceous powders with bees-wax, then the *Cerat. Vit. Antimon.* but neither of these medicines agreed with me.——I then took a medicine prepared by Mr. H——n of B——g in *Essex*, at the recommendation of a very worthy Gentleman, which, together with the warm weather, gave me relief for that summer, before which time I had not had any intermission in my disease from 1752

to 1755.——The autumn following it returned again with greater violence, so that I had not less than 30 or 36 stools in 24 hours, for more than three months, attended with a smarting pain in the lower *intestines*, like that of a wound; but I constantly observed it was more intense every afternoon about four o'clock.——I shou'd have observed, that for two years before, I had been afflicted with this pungent pain, though not in so great a degree, that I had voided much blood with *mucus*, and that every stool was attended with violent hick-ups.——I now had recourse to the testaceous powders, and the above-mentioned medicine of Mr. *H.* also to the *Bark*, and *Helvetius's* Tincture, and thought some of these medicines served to abate the distemper, but cannot say which of them it was.——In the summer 1756. I was tolerably well, but in the autumn the flux returned as violently as ever, attended with the before mentioned circumstances; I then took half a pint thrice a day of the following medicine. Two pounds of mutton-tallow boiled in a quart of milk to a pint and strained.

strained. From this remedy I received great benefit ; the discharge of blood and *mucus* lessened by the use of it very much, and I found a great abatement of the pain in the *intestines*.——In the summer 1757 I held pretty well, but in autumn the *Flux* returned, though not altogether with its former violence. Being then at College, and not having so good an opportunity of having the tallow medicine prepared for me as at home, I took a strong decoction of the *Bark* and Pomgranate shells, which did me service, and for the remaining part of the winter and summer 1758, I continued pretty free from the *Flux* ; but in the autumn it returned very violently again, I not having less than 20 or 24 stools in 24 hours, attended with the usual symptoms ; I then recurred to the decoction of the *Bark*, but the effect did not answer my expectation.——In the summer 1759 I drank freely of *Florence* wine, which, together with a dry season, made me flatter myself with being almost cured ; but in the autumn following I was as ill as at any time before.——I then took large quantities of the *Bark* in substance, and eat boiled rice very plentifully
for

for two months at least; and after taking a bark-bolus one morning and eating a quantity of boiled rice, I had a violent pain in my stomach, which increased and settled, fixing at last in the lower belly, where it continued very violent; on which account I drank usquebaugh, pepper-mint-water and rum, in all I believe near a pint, without any effect only making me very sick; I went to bed, and the pain rather increasing, took a dose of liquid landanum, but threw it up instantly; I then sent for an Apothecary, who gave me a common clyster, by which I found some relief, but it was of short duration; the pain returned and continued all night, next morning I had another clyster given me, which, with the application of warm flannels, &c. relieved me much; next day I was free from pain; and had only one stool during the continuance of this new complaint.—I now continued growing better, was pretty free from my *Flux* till autumn 1760, when it returned with its usual violence.—I then took Doctor *Hill's* butter-medicine, which is two or three spoonfuls of melted butter thrice a day; from which I found

great benefit.——The summer 1761, I continued pretty well; but in the autumn my old complaint visited me again; I then repeated the butter-medicine, but was disappointed in its effect. I next took the *Bark* with such success, that I soon thought myself almost entirely free from the *Flux*; but the *April* following, upon taking cold it returned and continued all the following summer to a great degree.——After having to no purpose, given the *Bark*, the tallow-medicine, and others which used to relieve me, a fair trial, I applied to you.—At this time I had not less than 12 or 14 stools in 24 hours, and in this state I had now been for three months.——Your advice to me was to boil two drams of the bark of the *Radix Simaroubæ* * in a pint and a quarter of water to a pint; of which decoction when strained, I took two ounces, without any thing added to it, at six on *Friday* evening, *October* 1st, and the like dose about eleven that night; it had no sensible operation, unless it promoted perspiration a little; however, it had this good effect, that
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* See *Lewis* and *Geoffroy* on the *materin medica* concerning this drug.—According to *Mons. Jussieu's* account of this drug in the *Mem. of the Royal Acad. of Sciences*, it was brought into *Europe* from *America* in the year 1713, and then used in the *Dysentery*.

my rest was not once disturbed by the *Flux* this night. Next morning I repeated the dose, did the same at six in the evening and eleven at night ; in the day time had but three stools, and one in the night, resting well ; stools now had neither blood nor *mucus* mixed with them, nor were they attended with pain.—I have observed your directions in the use of the medicine till the time of writing this letter, though not altogether with that strictness I did at first ; and now, I thank God, let me eat, drink or take what exercise I will, in shooting or otherwise, it is all the same : I am quite well, have an exceeding good appetite, and from almost a skeleton am grown plump and full of flesh ; nor has the moist weather this autumn had any effect upon me, which it always used to have before, ever since the disease first attacked me.

N. B. FOR four months before I was seized with this disease, my common food was nearly the same as in *England*, but on account of the excessive heat of the country where I then was, I frequently drank more than a gallon of lime juice and water, with-

out any spirituous liquor added to it, to which cause my disease was ascribed, as others who drank strong liquors plentifully kept free from the complaint.

This Gentleman has ever since enjoyed perfect good health.—In three other cases of this nature I have seen remarkable good effects from this medicine, after other means had failed.

The treatises written a few years ago, particularly on this disease, by two very learned Physicians, Doctor *Baker* and Doctor *Akenfide*, claim the most attentive reading for our instruction upon this subject.

When the Decoction was made stronger than I have mentioned, it was found to act too powerfully upon the stomach, and did not answer the intention.

The same Gentleman in the P. S. of another letter to me, dated Sept. the 24th, 1764, writes thus.

I SHALL now make you laugh at my quackery; however, as it is a singular instance of the virtue of the *Cort. Rad. Simaroubæ*, which wrought such an amazing cure in me, I cou'd not forbear giving you a true relation of it.—Mr. *John Dix*, a reputable farmer in this town, came to me about ten days ago, to inform me he had a cow at the point of death, desiring I wou'd accept of her for my dogs.—Upon inquiring into the nature of her disease, I found it was a *Flux*, or scouring as it is called in that species of cattle, which had been of long standing, and resisted all means used by the most skilful leeches.—I own I cou'd not help feeling for the poor creature, well remembering, that till I consulted you, my situation was as bad as her's: I immediately thought of my invaluable specific, and ordered half an ounce of this bark to be
bruised

bruised and boiled in five half pints of water to a quart, then strained, and that half a pint of the decoction shou'd be given her of a gentle warmth, twice a day. After the second dose the *Flux* abated, and by regularly continuing the medicine a few days, she was freed from the complaint.— My patient appears perfectly cured, eats heartily and is daily recovering strength, from the greatest degree of weakness, to which the violence of the disease had reduced her.

F I N I S.



